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09/834240

=> fil medl,hcapl,biosis,embase,jicst,wpids;
COST IN U.S. DOLLARS

SINCE FILE
ENTRY
0.21

TOTAL
SESSION
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=> s (affix? or adhes? or attach? or coat? or adhere? or appl?)(l)(protein or
peptide? or amino or biolog? material)(l)(silane or isocyan? or aminosilane or
cyanoethyldimethyldiethylaminosilane)

L1 114 FILE MEDLINE
L2 2731 FILE HCAPLUS
L3 138 FILE BIOSIS
L4 136 FILE EMBASE
L5 38 FILE JICST-EPLUS
L6 5087 FILE WPIDS

TOTAL FOR ALL FILES

L7 8244 (AFFIX? OR ADHES? OR ATTACH? OR COAT? OR ADHER? OR APPL?)(L)(PRO
TEIN OR PEPTIDE? OR AMINO OR BIOLOG? MATERIAL)(L)(SILANE OR
ISOCYAN? OR AMINOSILANE OR CYANOETHYLDIMETHYLDIETHYLAMINOSILANE)

=> s l7(l)glass(l)phosgene?

L8 0 FILE MEDLINE
L9 1 FILE HCAPLUS
L10 0 FILE BIOSIS
L11 0 FILE EMBASE
L12 0 FILE JICST-EPLUS
L13 1 FILE WPIDS

TOTAL FOR ALL FILES

L14 2 L7(L) GLASS(L) PHOSGENE?

=> dup rem l14

PROCESSING COMPLETED FOR L14

L15 2 DUP REM L14 (0 DUPLICATES REMOVED)

=> d ibib abs

L15 ANSWER 1 OF 2 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2004-009565 [01] WPIDS
CROSS REFERENCE: 2000-679514 [66]
DOC. NO. NON-CPI: N2004-006819
DOC. NO. CPI: C2004-002541

Searched by: Mary Hale 571-272-2507 REM 1D86

TITLE: Attaching biomolecules to a glass surface, useful for making quality control devices for e.g. immunohistochemical assays, through activated amino group on silanization reagent.

DERWENT CLASS: B03 B04 D16 P42 S03

INVENTOR(S): RAMANATHAN, H; SOMPURAM, S R

PATENT ASSIGNEE(S): (CYTO-N) CYTOLOGIX CORP

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 2003166261	A1	20030904	(200401)*		32

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 2003166261	A1	CIP of	US 1999-291351 19990414
		Cont of	US 2000-549855 20000414
			US 2001-834240 20010412

FILING DETAILS:

PATENT NO	KIND	PATENT NO
US 2003166261	A1	CIP of
		US 6281004

PRIORITY APPLN. INFO: US 2000-549855 20000414; US 1999-291351 19990414; US 2001-834240 20010412

AN 2004-009565 [01] WPIDS

CR 2000-679514 [66]

AB US2003166261 A UPAB: 20040102

NOVELTY - Method for **attaching** a biomolecules (I) to a **silane-treated glass** surface that has an end-capped **amino** group comprising:

(a) reacting this group with a **phosgene** equivalent (II) to form protected **isocyanato**; and

(b) reacting this with an **amino** group of (I) so that (I) becomes covalently **attached**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) similar method in which the **silane-treated glass** surface has an end-capped **isocyanato** group which is reacted:

(a) with blocking reagent; and

(b) with **amino** group in (I);

(2) similar method in which the **silane-treated** surface has an end-capped **amino** which is:

(i) reacted with (II) to form an end-capped group of structure =N-CO-N= or =N-COO-N=; and

(ii) reacting this with **amino** group in (I); and

(3) method for storing a microscope slide, suitable for covalent **attachment** of a molecule to its surface by treating a **silane-treated** slide, having an end-capped **isocyanato** group with a blocking reagent.

USE - The method is used to prepare quality control devices for use with assays that measure analytes in cells or tissues, particularly immunohistochemical analysis, where selected antigens are detected, or in situ nucleic acid hybridization.

ADVANTAGE - Quality control devices produced by the new method are accurate, reliable and easy to use; they ensure that each sample has received the correct reagents, in the proper sequence, and verify the

integrity of these reagents.
Dwg.0/14

=> d 2 ibib abs

L15 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:189015 HCAPLUS
DOCUMENT NUMBER: 130:268244
TITLE: Reactive silane/silicone oil lubricating and parting material
INVENTOR(S): Torikoshi, Kaoru; Kobayashi, Tomoo; Kanazawa, Akio
PATENT ASSIGNEE(S): Fuji Xerox Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11071521	A2	19990316	JP 1998-2236	19980108
PRIORITY APPLN. INFO.:			JP 1997-166423	19970623

AB Title material, having a good **adhesion** and chemical bonding on surface of metal, ceramics, **glass**, plastics, rubber, paper, etc., useful for lubricating and releasing film in electrophotog. and printing, comprises a reactive **silane** and a silicone oil. Thus, an aluminum substrate was **coated** with zirconium compound 10 (Orgatix ZC540) and **silane** compound (A 1110) 40 parts, then polyvinyl butyral (Eslec BM-S)-**glass** beads, followed by a charge-transfer layer **coat** from 4,4'-[1,4-phenylenebis(1-methylethylidene)]bis(2-methylphenol)/**phosgene** copolymer 10, N,N'-diphenyl-N,N'-di-p-tolyl-benzidine 1 and tritolylamine 8 parts, and finally with a lubricating and parting **coat** from fluoro resin (Cefral **Coat** A 101B) 2, tetraisocyanatosilane 20, silicone disilane (YSR 3022) 2, and **amino**-modified silicone oil (TSF 4702) 18 parts to give a electrophotog. photosensitive material, which was tested in an electrostatic copying testing device, showing surface potential -820 V, half-reduction light exposure energy 7.3 erg·cm², and remaining potential -38 V after irradiation with 10 lx white light for 1 s.

=> s (affix? or adhes? or attach? or coat? or adhere? or appl? or bond?)(l)phosgene?(l)(silane or isocyan? or aminosilane or cyanoethyldimethyldiethylaminosilane)(l)glass

L16 0 FILE MEDLINE
L17 11 FILE HCAPLUS
L18 0 FILE BIOSIS
L19 0 FILE EMBASE
L20 0 FILE JICST-EPLUS
L21 7 FILE WPIDS

TOTAL FOR ALL FILES

L22 18 (AFFIX? OR ADHES? OR ATTACH? OR COAT? OR ADHER? OR APPL? OR BOND?)(L) PHOSGENE?(L)(SILANE OR ISOCYAN? OR AMINOSILANE OR CYANOETHYLDIMETHYLDIETHYLAMINOSILANE)(L) GLASS

=> s 122 not 114

L23 0 FILE MEDLINE
L24 10 FILE HCAPLUS
L25 0 FILE BIOSIS

Searched by: Mary Hale 571-272-2507 REM 1D86

L26 0 FILE EMBASE
L27 0 FILE JICST-EPLUS
L28 6 FILE WPIDS

TOTAL FOR ALL FILES

L29 16 L22 NOT L14

=> dup rem l29

PROCESSING COMPLETED FOR L29

L30 16 DUP REM L29 (0 DUPLICATES REMOVED)

=> d 1-16 ibib abs

L30 ANSWER 1 OF 16 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 2002-696678 [75] WPIDS

DOC. NO. CPI: C2002-197276

TITLE: Integrated process for the production of a dialkyl carbonate and a diol from an alkylene oxide, carbon dioxide and an aliphatic monohydric alcohol.

DERWENT CLASS: A41 A60 B05 E19 H06 H07

INVENTOR(S): BUCHANAN, J S; JIANG, Z; KOWALSKI, J A; SANTIESTEBAN, J G

PATENT ASSIGNEE(S): (ESSO) EXXONMOBIL CHEM PATENTS INC

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6407279	B1	20020618	(200275)*		9

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6407279	B1	US 1999-444231	19991119

PRIORITY APPLN. INFO: US 1999-444231 19991119

AN 2002-696678 [75] WPIDS

AB US 6407279 B UPAB: 20030828

NOVELTY - Integrated process for the production of a dialkyl carbonate and a diol from an alkylene oxide, carbon dioxide and an aliphatic monohydric alcohol is new.

DETAILED DESCRIPTION - Integrated process for the production of a dialkyl carbonate and a diol from an alkylene oxide, carbon dioxide and an aliphatic monohydric alcohol comprises:

(a) reacting an alkylene oxide with CO₂ in the presence of a carbonation catalyst to give a crude cyclic carbonate stream;

(b) directing the crude cyclic carbonate stream to a second reaction zone;

(c) reacting the cyclic carbonate with an aliphatic monohydric alcohol in the presence of a transesterification catalyst to give a crude stream of the corresponding dialkyl carbonate and diol; and

(d) recovering the dialkyl carbonate and diol from the crude product stream.

USE - Dialkyl carbonates are important intermediates for the synthesis of fine chemicals, pharmaceuticals and plastics and are useful as synthetic lubricants, solvents, plasticizers and monomers for organic glass and various polymers including polycarbonate (used in a wide range of applications due to its transparency, shock resistance and processability). Due to its low toxicity, dimethyl carbonate may be used to replace toxic intermediates such as phosgene and dimethyl sulfate in many reactions such as the preparation of urethanes

and **isocyanates**, the quaternization of amines, and the methylation of phenol or naphthol. Dimethyl carbonate may also be used commercially as an additive for fuels, and in the production of other alkyl and aryl carbonates.

ADVANTAGE - The process does not produce corrosive by-products and avoids the use of highly toxic **phosgene**.
Dwg,0/1

L30 ANSWER 2 OF 16 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2001-245907 [26] WPIDS
DOC. NO. NON-CPI: N2001-175027
DOC. NO. CPI: C2001-074101
TITLE: Biologically degradable, sealable laminated film
comprising a non-thermoplastic low elastic support film
and an elastic extrudable and degradable sealing layer,
useful for packaging cosmetics and hygiene articles.
DERWENT CLASS: A11 A23 A25 A32 A92 P73
INVENTOR(S): GREFE, U; KLEEMISS, M; TAMKE, H
PATENT ASSIGNEE(S): (WOLF) WOLFF WALSRODE AG
COUNTRY COUNT: 94
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 19935965	A1	20010201	(200126)*		9
WO 2001008881	A2	20010208	(200126)	GE	
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ					
NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM					
DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC					
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE					
SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000066949	A	20010219	(200129)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 19935965	A1	DE 1999-19935965	19990730
WO 2001008881	A2	WO 2000-EP6849	20000718
AU 2000066949	A	AU 2000-66949	20000718

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000066949	A Based on	WO 2001008881

PRIORITY APPLN. INFO: DE 1999-19935965 19990730

AN 2001-245907 [26] WPIDS

AB DE 19935965 A UPAB: 20010515

NOVELTY - A biologically degradable, compostable, and sealable laminated film made from a non-thermoplastic biologically degradable support film of low elasticity and an elastic and extrudable biologically degradable sealing layer of melting point at least 50 deg. C below the melting- or decomposition point of the support layer is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for preparation of the film by extrusion coating of the support film with the sealing film.

USE - The film is useful for packaging of cosmetics and hygiene articles, and waste disposal, and agriculture.

ADVANTAGE - The film has improved mechanical and barrier properties.

L30 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:790940 HCAPLUS
DOCUMENT NUMBER: 132:37044
TITLE: Manufacture of alkoxyisilyl-containing polymer coatings
with discoloration prevention for optical materials
INVENTOR(S): Kobayashi, Hideki; Masatomi, Akira
PATENT ASSIGNEE(S): Dow Corning Toray Silicone Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11343457	A2	19991214	JP 1998-229315	19980730
US 6100367	A	20000808	US 1999-276512	19990325

PRIORITY APPLN. INFO.: JP 1998-102020 A 19980330

AB Title **coatings** are prepared by (a) reaction of polycarbonates and/or polyarylates containing ≥ 2 unsatd. side and/or terminal groups and having a number-average mol. weight (Mn) of 500-10,000 with alkoxyisilanes $\text{HSi(OR')aR}_3\text{-a}$ [R = (substituted) C1-10 hydrocarbyl; R' = (substituted) C1-8 hydrocarbyl; a = 1-3] and/or their partially hydrolyzates in organic solvents containing hydrosilylation metal catalysts, (b) mixing with (silane-treated) adsorbents selected from activated carbon, SiO₂, SiO₂ gel, and glass beads, and (c) separating the adsorbents to form polymer solns. containing ≤ 1 ppm the metal catalysts. A bisphenol A-2,2'-diallylbisphenol A-**phosgene** copolymer (with Mn of 104) was reacted with MeSiH(OMe)_2 in chlorobenzene containing a Pt complex catalyst, mixed with a chlorobenzene solution containing γ -(2-aminoethyl)aminopropyltrimethoxysilane-treated SiO₂ gel, and filtered to give a solution containing 0.5-ppm Pt, which was spread on a glass plate and heated at 120° for 10 min to form a nonyellowing transparent film with pencil hardness H and water-contact angle of 87°.

L30 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:48999 HCAPLUS
DOCUMENT NUMBER: 130:154684
TITLE: Laminated films with low heat-sealing temperature and flavor barrier property, and resin packaging container with high mechanical strength using them
INVENTOR(S): Okamoto, Masaya
PATENT ASSIGNEE(S): Idemitsu Petrochemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11010818	A2	19990119	JP 1997-170842	19970627

PRIORITY APPLN. INFO.: JP 1997-170842 19970627

AB The laminated films, useful for beverage or food packaging, have layers comprising polycarbonates with glass transition temperature (Tg) $\leq 140^\circ$ as heat-sealing layers in package-forming process. Thus, bisphenol A (I)-**phosgene** oligomer was reacted with

2,2-bis(4-hydroxyphenyl)octadecane and I to give a polymer with Tg 124°, which was mixed with 200 ppm tris(nonylphenyl) phosphite (antioxidant) and extruded to give pellets. Then, the pellets were extruded on the surface of a laminate comprising an **isocyanate adhesive** layer, an Al foil, and a nylon film to give a laminate, which was folded via the polycarbonate layer and heat sealed to give a pouch showing tensile strength 3.3 kg/15 mm.

L30 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:496033 HCAPLUS
DOCUMENT NUMBER: 129:261745
TITLE: Coating systems based on tricarbamate crosslinkers derived from triaminonane
AUTHOR(S): Higginbottom, H. P.; Bowers, G. R.; Hill, L. W.; Courtier, J. F.
CORPORATE SOURCE: Specialty Resins Division, Monsanto Company, Springfield, MA, 01151, USA
SOURCE: Progress in Organic Coatings (1998), 34(1-4), 27-38
CODEN: POGCAT; ISSN: 0300-9440
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Trifunctional carbamate alc.-blocked **isocyanates** were evaluated as crosslinkers for hydroxyl-functional polyester or acrylic coreactants. Com. and developmental tin catalysts of varying structure were used to catalyze cure. Some of the catalysts were observed to be sufficiently active to permit extensive crosslinking of model **coating** systems at temps. currently used for powder **coatings** or higher temperature cure thermoset liquid **coatings**. Either liquid or solid carbamate crosslinkers were obtained by purposeful variation in the structures of the alc. portion of the carbamate. Carbamates were prepared directly by a non-**phosgene** process from 4-aminomethyl-1,8-diaminooctane, triaminononane (TAN). TAN was converted to the corresponding aliphatic triisocyanate, called TAN triisocyanate (TTI), from which blocked **isocyanates** were prepared using common blocking agents such as Me Et ketoxime, caprolactam, and dimethylpyrazole. Cure response was determined by cure profile studies involving hardness, solvent resistance and impact resistance detns. on panels cured in a gradient oven. Dynamic mech. anal. was used to determine **glass** transition temperature and crosslink d. of selected cured films.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE. FORMAT

L30 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:703208 HCAPLUS
DOCUMENT NUMBER: 121:303208
TITLE: Radiation-curable polyurethanepolycarbonate acrylate oligomers with good tensile strength and elongation
INVENTOR(S): Komeno, Hajime; Kuki, Yukihiro; Ikeda, Junichi; Tsujikawa, Tomoko
PATENT ASSIGNEE(S): Kyoeisha Kagaku Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06166737	A2	19940614	JP 1992-321566	19921201
JP 3301447	B2	20020715		

PRIORITY APPLN. INFO.:

JP 1992-321566

19921201

AB Title oligomers, useful for **coatings** and inks, contain a linear backbone with number average mol. weight (Mn) 103 - 105 formed by hydroxy-terminated

polycarbonates with Mn 800 ± 200 containing repeating units O(CH₂)₆O₂C and O(CH₂)₅O₂C at 9/1 -1/9 and organic **isocyanates** and terminal unsatd. oxycarbonylimide groups and are manufactured by addition polymerization of the polycarbonates and organic **isocyanates** and treating the resulting **isocyanate**-terminated polyurethane oligomers with unsatd. hydroxy compds. Thus, 1,6-hexanediol-1,5-pentanediol-**phosgene** copolymer with Mn 790, OH value 142.0, and initial hexanediol/pentanediol ratio 5.0/5.0 (mol) was treated with IPDI in the presence of dibutyltin dilaurate and then with hydroxyethyl acrylate at 75-80° to give a polycarbonatepolyurethane acrylate with average mol. weight 3850. A mixture

of 97

g of the polycarbonatepolyurethane acrylate and 3.0 g Darocur 1173 was **applied** to a **glass** plate to 30-μm thickness and UV-irradiated to give a product with hardness (JIS A) 32, tensile strength 350 kg/cm², and elongation 100%. A **coating** composition of the polycarbonatepolyurethane acrylate 50, phenoxyethyl acrylate 20, trimethylolpropane-ethylene oxide adduct triacrylate 30, and hydroxycyclohexyl Ph ketone 5 parts was **applied** to a 1-mm-thick PVC sheet to 30 μm thickness and UV-cured to form a film with good scratch resistance against stainless steel wool, cross-cut **adhesion** 100/100, and good flexibility.

L30 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:518648 HCAPLUS

DOCUMENT NUMBER: 122:241458

TITLE: Evaluation of glass fibers in reinforced aromatic polycarbonate-ABS molding blends

INVENTOR(S): Gemmell, Linda Mcadam; Tennant, Otho Wade; Gallucci, Robert Russell

PATENT ASSIGNEE(S): General Electric Co., USA

SOURCE: Eur. Pat. Appl., 19 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 624621	A2	19941117	EP 1994-303267	19940506
EP 624621	A3	19960925		
EP 624621	B1	19990804		
R: DE, ES, FR, GB, IT, NL				
US 5384353	A	19950124	US 1993-60896	19930512
ES 2134319	T3	19991001	ES 1994-303267	19940506
JP 07048498	A2	19950221	JP 1994-96816	19940511
JP 3058557	B2	20000704		

PRIORITY APPLN. INFO.:

US 1993-60896

A 19930512

AB A thermoplastic resin composition with improved impact strength comprises an aromatic polycarbonate resin, rubber-modified vinyl aromatic-vinyl cyanide graft

copolymer, and **glass** fibers which have been treated with polyolefin wax and, optionally, a functionalized **silane**. The nature of the **coating** on the **glass** fibers provides the composition with improved impact strength over binding **glass**. For example, a blend containing bisphenol A-**phosgene**-trimellitic anhydride copolymer blend 64, acrylonitrile-styrene copolymer 20, ABS graft copolymer 16, and **glass** fibers **coated** with

polyethylene wax and γ -aminopropyltriethoxysilane (I) coupling agent 11.2 parts had notched Izod impact strength 4.1 ft-lb/in (73°F) and 1.8 ft-lb/in (-20°F), vs. 2.0 and 1.4 for a similar blend reinforced with **glass** fiber **coated** with styrene-Et acrylate binder and I.

L30 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:32160 HCAPLUS
DOCUMENT NUMBER: 120:32160
TITLE: Thermally reversible melt-processable isocyanate-based polymer compositions
INVENTOR(S): Markle, Richard A.; Brusky, Phyllis L.; Cremeans, George E.; Elhard, Joel D.; Bigg, Donald M.; Sowell, Sylvester
PATENT ASSIGNEE(S): Battelle Memorial Institute, USA
SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9303080	A2	19930218	WO 1992-US6493	19920804
WO 9303080	A3	19930318		
US 5239039	A	19930824	US 1991-740335	19910805
EP 598039	A1	19940525	EP 1992-917849	19920804
EP 598039	B1	19981209		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				
JP 06509602	T2	19941027	JP 1992-503813	19920804
JP 3370326	B2	20030127	JP 1993-503813	19920804
US 5470945	A	19951128	US 1994-193029	19940203

PRIORITY APPLN. INFO.:
US 1991-740335 A2 19910805
US 1992-851840 A2 19920316
US 1990-475112 B2 19900205
US 1991-651020 A2 19910204
WO 1992-US6493 W 19920804

AB A stable polymer composition having improved melt-processability combined with high-performance characteristics, useful for molding, hot-melt **adhesives**, **coatings**, especially for exterior automotive finishes on composite materials, e.g., polypropylene (PP) or PET polyester, comprise a compound with labile H functionality and a compound with **isocyanate** functionality. These compds., e.g., an aromatic liquid-crystalline polyester, an aromatic polycarbonate or polyimide, a poly(aryl sulfide) or polyarylimidazolidine, are linked by a thermally-reversible (urethane, urea, etc.) linkage that dissocs. in the melt and reforms by cooling. Thus, a hot melt **adhesive** composition containing PCP 350 (a polycaprolactone diol) 3.280, isophthalic acid bishydroquinone diester 1.696, 4-PhC6H4OH 0.0180, phenolic OH-terminated bisphenol A-**phosgene** polycarbonate oligomer 0.580, trimethylolpropane 0.101, and MDI 3.116 g had lap shear strength 3200 lb/in² and, when used as an in-mold **coating**, provided class A finish on PP- and PET-**glass** fiber compns. at 177° and 600-800 psi.

L30 ANSWER 9 OF 16 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 1993-196306 [24] WPIDS
DOC. NO. CPI: C1993-087043
TITLE: Preparation of silyl organo carbamate or silyl isocyanurate - by reacting amino silane with di alkyl carbonate or di aryl carbonate in presence of basic catalyst,

neutralising, adding cracking catalyst and heating.

DERWENT CLASS: A26 A60 E11 F06 G02

INVENTOR(S): PEPE, E J; SU, S; TURNER, S M; SU, S H

PATENT ASSIGNEE(S): (OSIS-N) OSI SPECIALTIES INC; (OSIS-N) OSI SPECIALTIES INC; (UNIC) UNION CARBIDE CHEM & PLASTICS; (UNIC) UNION CARBIDE CHEM & PLASTICS CO INC; (UNIC) UNION CARBIDE CHEM & PLASTICS TECHNOLOGY

COUNTRY COUNT: 7

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 5218133	A	19930608	(199324)*		9
EP 583581	A1	19940223	(199408)	EN	13
R: DE FR GB IT NL					
JP 06228166	A	19940816	(199437)		11
EP 583581	B1	19970528	(199726)	EN	17
R: DE FR GB IT NL					
DE 69311023	E	19970703	(199732)		
JP 10067788	A	19980310	(199820)		12
JP 2916442	B2	19990705	(199932)		12
JP 2963309	B2	19991018	(199949)		11

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 5218133	A	US 1992-932584	19920820
EP 583581	A1	EP 1993-110257	19930628
JP 06228166	A	JP 1993-178476	19930628
EP 583581	B1	EP 1993-110257	19930628
DE 69311023	E	DE 1993-611023	19930628
		EP 1993-110257	19930628
JP 10067788	A Div ex	JP 1993-178476	19930628
		JP 1997-195226	19930628
JP 2916442	B2 Div ex	JP 1993-178476	19930628
		JP 1997-195226	19930628
JP 2963309	B2	JP 1993-178476	19930628

FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69311023	E Based on	EP 583581
JP 2916442	B2 Previous Publ.	JP 10067788
JP 2963309	B2 Previous Publ.	JP 06228166

PRIORITY APPLN. INFO: US 1992-932584 19920820

AN 1993-196306 [24] WPIDS

AB US 5218133 A UPAB: 19950619

Preparation of a silyl organocarbamate comprises reacting an **aminosilane** with a dialkyl carbonate or, diaryl carbonate or a mixture of these in the presence of a basic catalyst to form a reaction mixture containing silylorganocarbamate.

Also claimed are: (i) preparation of a silylisocyanurate by: (1) reacting an **aminosilane** with a dialkyl carbonate or, diaryl carbonate or mixture of these in the presence of a basic catalyst to form a reaction mixture; (2) neutralising the basic catalyst with a neutralising agent; and (3) adding a cracking catalyst while heating to obtain the silylisocyanurate; and (ii) preparation of a silylisocyanurate by heating a silyl organocarbamate at temperature sufficient for dissociation of the carbamate in the presence of a cracking catalyst and a trimerisation

catalyst at subatmospheric pressure.

USE/ADVANTAGE - Mfr. of silylorganocarbamate and a silylisocyanurate are claimed. The silylisocyanurate can be used as an accelerator or promoter for **adhesion** of room temperature vulcanisable organosiloxanes and **silane** modified polymers, as an additive for organosiloxane compsns. suitable for fibre treatment and in automotive **coatings**. The silylorganocarbamate can be used as coupling agent for fibre **glass** and as agent for imparting water repellency. The processes are simple and provide the prods. in a high yield, with little colour, also they avoid the handling of toxic materials such as **phosgene** and **isocyanate** intermediates

Dwg.0/0

Dwg.0/0

ABEQ EP 583581 B UPAB: 19970626

A process for preparing a silylorganocarbamate, which process comprises reacting an aminosilane with a dialkyl carbonate, diaryl carbonate or a mixture thereof in the presence of a basic catalyst to form a reaction mixture containing the silylorganocarbamate.

Dwg.0/0

L30 ANSWER 10 OF 16 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN

ACCESSION NUMBER: 1988-229373 [33] WPIDS

DOC. NO. CPI: C1988-102424

TITLE: Polycarbonate resins with penta halo phenoxy end gp. - have good flame retardance, fluidity, impact resistance and transparency.

DERWENT CLASS: A23

INVENTOR(S): KOMATSU, T; OKAMOTO, M; MASAYA, O; TAKASHI, K

PATENT ASSIGNEE(S): (IDEM) IDEMITSU PETROCHEM CO

COUNTRY COUNT: 14

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 278498	A	19880817	(198833)*	EN	29
R: BE CH DE FR GB IT LI NL SE					
JP 63199225	A	19880817	(198839)		
BR 8800581	A	19880927	(198843)		
JP 63223037	A	19880316	(198843)		
JP 63227662	A	19880921	(198844)		
JP 01098623	A	19890417	(198921)		
US 5037937	A	19910806	(199134)		
CA 1317410	C	19930504	(199323)		
JP 05041650	B	19930624	(199328)		7
JP 05083101	B	19931124	(199350)		6
JP 06037553	B2	19940518	(199418)		6
KR 9405872	B1	19940624	(199616)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 278498	A	EP 1988-101972	19880211
JP 63199225	A	JP 1987-29673	19870213
JP 63223037	A	JP 1987-55309	19870312
JP 63227662	A	JP 1987-61282	19870318
JP 01098623	A	JP 1988-162765	19880701
US 5037937	A	US 1989-294906	19890106
CA 1317410	C	CA 1988-555976	19880106
JP 05041650	B	JP 1987-29673	19870213
JP 05083101	B	JP 1987-61282	19870318
JP 06037553	B2	JP 1987-55309	19870312

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 05041650	B Based on	JP 63199225
JP 05083101	B Based on	JP 63227662
JP 06037553	B2 Based on	JP 63223037

PRIORITY APPLN. INFO: JP 1987-29673 19870213; JP 1987-55309
19870312; JP 1987-61282 19870318; JP
1987-256269 19871013

AN 1988-229373 [33] WPIDS

AB EP 278498 A UPAB: 19930923

A polycarbonate resin has (1) a repeating unit (I) of general formula (A) where $X_o = -S(:O)2-$, and a repeating unit (II) of general formula (B), where $R_1-R_4 = H$, 1-4C alkyl (pref. $R_3, R_4 = H$, $R_1, R_2 = methyl$); $m, n = 1-4$; (2) a pentahalophenoxy gp. of formula (C), where $X_1-X_5 = H$, (pref. bromine), as its end gp. (pref. **bonded** to both ends of the polymer); and (3) a viscosity average mol.weight of at least 5000 (pref. 10000-30000).

A process for the preparation of the resin (1) comprises reacting a bisphenol cpd. of formula (D), a dihydroxy cpd. of formula (E), and a carbonate-forming cpd. (pref. **phosgene**) by the use as a molecular weight controlling agent of a pentahalogenophenol of formula (F).

Specifically, the mole fraction of (I) based on the total of (I)+(II) is 0.005-0.4. In the preparation, the pH of the reaction system is maintained at 10 or more and a tert. amine (pref. triethylamine) is used as a dehydrohalogenation agent. The resin may contain (pref. 1-100 pts.weight per 100 pts. resin of) **glass** fibre (pref. of length 1-8mm and dia. not more than 20 microns), opt. subjected to surface treatment using a **silane** coupling agent.

ADVANTAGE - These polycarbonate resins have good flame retardance, fluidity and therefore mobility, impact resistance and transparency. They are useful in production of e.g. home electric **appliances** and office automation devices and as construction materials.

0/4

ABEQ US 5037937 A UPAB: 19930923

A new polycarbonate resin consists of (1) repeating units of formula (A) and formula (B), where X_0 gp. of formula (i); $R_1-R_4 = H$ or 1-4C alkyl gp.; m and $n = 1-4$; and (2) a pentahalogenophenoxy gp. of formula (C), $X_1-X_5 =$ halogen atom as an end gp.

The resin has a viscosity average mol.wt. of at least 5000, wherein the mol. fraction of repeating unit A, based on the total (A) and (B), is from 0.005-0.4.

USE/ADVANTAGE - These resins are excellent in flame retardance, fluidity, impact resistance and transparency.

ABEQ JP 93041650 B UPAB: 19931116

Polycarbonates have units of formulae (I) and (II) pentahalogenophenoxy gps. of formula (III) (where X_1-X_5 are halogen) at terminal position and a viscosity average molecular wt. of at least 500. Bispheno sulphone, bisphenol A, pentahalogenophenol in methylene chloride, chlorobenzene, pyridine, chloroform or carbon tetrachloride are mixed with alkali aq. soln. and phosgene is introduced while cooling the reaction vessel, pref. at least at pM of 10.

USE/ADVANTAGE - The polymer have improved flame resistance, improved fluidity, good impact resistance and transparency. The polymers are used for electric appliances or building materials. (J63199225-A)

L30 ANSWER 11 OF 16 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1982-82528E [39] WPIDS

Searched by: Mary Hale 571-272-2507 REM 1D86

TITLE: Coating polycarbonate resin mouldings - first with (meth)acrylate -vinyl tri alkoxy silane, copolymer and then with alkyl tri alkoxy silane partial hydrolysis condensate.

DERWENT CLASS: A23 A82 G02 P73

PATENT ASSIGNEE(S): (DAIL) DAICEL CHEM INDS LTD

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 57135835	A	19820821	(198239)*		5

PRIORITY APPLN. INFO: JP 1981-21677 19810216

AN 1982-82528E [39] WPIDS

AB JP 57135835 A UPAB: 19930915

Process comprises **applying** undercoating paint which consists of copolymer of (A) at least 1 of alkyl acrylate, alkyl methacrylate, hydroxy alkyl acrylate, hydroxy alkyl methacrylate with (B) vinyl trialkoxy **silane**, to the surface of polycarbonate resin moulding, top **coating** with mainly partial hydrolysis condensate of alkyl trialkoxy **silane** and heat-curing.

Pref. the polycarbonate resin is aromatic polycarbonate derived from bisphenol A and **phosgene**, aliphatic polycarbonate such as polydiethylene glycol bisallyl carbonate, etc.. The vinyl trialkoxy **silane** is vinyl trimethoxy **silane**, vinyl triethoxy **silane** etc..

The polycarbonate resin moulding obtd. has excellent close **adhesion** property, scratch resistance, hot water resistance, weathering property and solvent resistance. It is useful as window **glass** for cars, trains, aircraft, buildings.

L30 ANSWER 12 OF 16 HCAPLUS. COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1974:451307 HCAPLUS

DOCUMENT NUMBER: 81:51307

TITLE: Polyurethanes and diisocyanato sulfone and diamino sulfone intermediates

INVENTOR(S): Williams, Ralph P.

PATENT ASSIGNEE(S): Phillips Petroleum Co.

SOURCE: U.S., 3 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3801548	A	19740402	US 1972-244273	19720414

PRIORITY APPLN. INFO.: US 1969-822302 19690506

AB Bis(3-**isocyanatopropyl**) sulfone (I) [51920-07-1] was prepared and used as a starting material for non-yellowing polyurethane **coatings**. Thus, bis(3-aminopropyl) sulfide dihydrochloride [51920-08-2] was treated with H₂O₂ in the presence of tungstic acid to give bis(3-aminopropyl) sulfone dihydrochloride [51920-09-3], m.p. 192-4.deg., which was treated with **phosgene** [75-44-5] to give I (b.p. 200-5.deg. at 0.35 ml). A mixture of 14.1 g I and 13.8 g Niax Polyol PPG 425 (polypropylene glycol with mol. weight 456) in 9.3 g EtOAc was heated 18 hr at 65-70.deg. to give an NCO-terminated prepolymer solution A **coating** formulation containing the prepolymer solution 5, glycerol 0.193,

1:1 EtO (CH₂)₂OAc-toluene containing 0.1% dibutyltin dilaurate 3.1, and 1:1 EtO(CH₂)₂OAc-toluene 3.0 g was **applied** to a **glass** slide and dried 4 days in air at 25.deg. to give a 0.8-1.6-mil polysulfone-polyurethane [51980-29-1] film which has yellowness index 3.4 after a 400-hr accelerated weathering test, compared with 18.0-18.9 after 401.5 hr for a film prepared using a com. tolylene diisocyanate instead of I.

L30 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1969:472038 HCAPLUS
DOCUMENT NUMBER: 71:72038
TITLE: 1,4-Bis(isocyanato- and isothiocyanatomethyl)-1-phenyltetrahydronaphthalene
INVENTOR(S): Nash, Edmund G.; Kamal, Marwan R.; Aelony, David
PATENT ASSIGNEE(S): General Mills, Inc.
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3455981	A	19690715	US 1966-597871	19661130

PRIORITY APPLN. INFO.: US 1966-597871 19661130

GI For diagram(s), see printed CA Issue.

AB The title compds. (I, X = S or O), useful in the production of **coatings** and elastomers with good solvent resistance, are prepared Thus, 60 g. NH₃ was added to 250 g. 1,4-dicyano-1-phenyltetrahydronaphthalene, 250 ml. MeOH, and 40 g. Raney cobalt, the mixture pressurized to 3000 psi. with H₂, and the temperature raised to 130°. These conditions were maintained 2 hrs. and the autoclave cooled to 30° and vented. The diamine product in anhydrous Et₂O was treated with dry HCl yielding 151.3 g. of the dihydrochloride salt, which was mixed with 3 l. azeotroped xylene. **Phosgene** was bubbled in at 124-34° was a total of 311 g. being added over 6 hrs. and 10 min. The resulting clear solution was refluxed 0.5 hr. while dry N bubbled through the solution The product was worked up, yielding 75 g. I (X = O). II 7.9, xylene 7.5, cellulose acetate 7.5, and a ketimine-blocked polyamine 14.2 g. was **applied** as a 1.5-mil **coating** on **glass**, tin plate, steel, and Al panels. The ketimine-blocked polyamine was prepared by treating 1 mole diethylenetriamine with 2 moles MeCOBu-iso, and the secondary amine group of the polyamine blocked by treating 2 moles of the above product with 1 mole fatty dimeric **isocyanate**. The **coated** substrates were exposed to 50% relative humidity at 72°F. The **coatings** became tack free in 25 min. and were cured under the above conditions in 14 days. The **coating** on **glass** had pencil hardness B and Sward Rocker hardness 42. The **coating** on tin plate had extensibility >60%. The **coatings** had very good **adhesion** to **glass**, tin plate, and Al and fair **adhesion** to steel. The cured **coatings** also had very good solvent resistance, remaining hard when immersed 18 hrs. in water, aviation gasoline, Skydrol 500, mineral spirits, 20% NaOH and oleic acid. They remained medium hard in toluene and EtOH and were softened by 5% HOAc and 37% H₂SO₄.

L30 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1965:446375 HCAPLUS
DOCUMENT NUMBER: 63:46375
ORIGINAL REFERENCE NO.: 63:8403g-h
TITLE: Silanes and siloxanes containing isocyanate groups

Searched by: Mary Hale 571-272-2507 REM 1D86

PATENT ASSIGNEE(S): Union Carbide Corp.
SOURCE: 12 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6410323	A	19650308	NL 1964-10323	19640904
BE 652572	A	19641231	BE 1964-652572	19640902
BE 727989	A	19690806	BE 1969-727989	19690206
PRIORITY APPLN. INFO.:			US 1963-307003	A 19630906
			US 1968-707365	A 19680207

GI For diagram(s), see printed CA Issue.

AB The title compds. are prepared by reaction of **silanes** with **phosgene**. Thus, 43 g. (4-H₂NC₆H₄SiMe₂)₂O in 100 cc. toluene was slowly added in 20 min. to 100 g. **phosgene** and 100 cc. toluene cooled to -20° in a 1-l. **glass** reactor. The mixture was heated to 110° under N, toluene evaporated, and the mixture distilled to give 70 mole-% (4-OCNC₆H₄SiMe₂)₂O, b_{0.09} 149-51°. II was similarly prepared from the corresponding amine in 98 mole-% yield. Also prepared were Me₃SiO[SiMe[(CH₂)₄NCO]O]_{3.7}(SiMe₂)₆₅SiMe₃ and [OCN(CH₂)₄SiMe₂]₂O. The products are useful for preparation of hydraulic fluids, laminated resins, elastomers, and **adhesives**.

L30 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1948:20404 HCAPLUS
DOCUMENT NUMBER: 42:20404
ORIGINAL REFERENCE NO.: 42:4388a-d
TITLE: Condensation derivatives of rubber
INVENTOR(S): Nicol, Wm. H.
PATENT ASSIGNEE(S): Wingfoot Corp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2439369		19480406	US	

AB In order to improve tire-cord **adhesion** properties, rubber treated with chlorostannic acid, tin tetrachloride, BF₃, FeCl₃, or other amphoteric metal halides, sulfonic or chlorosulfonic acids, HF acid, or H halides, may be further treated with 1-5% of any diisocyanate, aliphatic or aromatic. Representative compds. are methylene di(p-phenylene **isocyanate**), hexamethylene diisocyanate, p-phenylene diisocyanate, m-phenylene diisocyanate, diphenylene diisocyanate, toluene diisocyanates, dimethylphenylene diisocyanates, naphthalene diisocyanates, diisocyanates of dioxane, ethylene di(oxytrimethylene **isocyanate**), and the diisocyanates of other glycol ethers, dipropyl ethers, etc. The first mentioned is preferred. These and other diisocyanates may be prepared by passing HCl through a solution of the diamine, then heating and stirring while **phosgene** is added. The **adhesives** prepared are suitable for rubber and synthetic elastomers, paper, textiles, cork, cotton, Holland fabric, regenerated cellulose, cellulose derivs., polymeric linear polyamides, **glass**, metal, rubber hydrochloride, and various vinyl polymers and copolymers. Plasticizers, diluents, fillers, reinforcing agents, age resisters, resins, dyes, etc., may be included in the **adhesive**. If the diisocyanate (10-40%) is added to solid rubber derivs. rather than to the solution, molding material is obtained which is also suitable for paints and **coating**

compositions.

L30 ANSWER 16 OF 16 WPIDS COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1968-04318Q [00] WPIDS
TITLE: Transparent polycarbonate-polysiloxane copolymers of.
DERWENT CLASS: A00
PATENT ASSIGNEE(S): (FARB) FARBENFAB BAYER AG
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 3379790	A		(196800)*		

PRIORITY APPLN. INFO: DE 1960-F301409 19600610

AN 1968-04318Q [00] WPIDS

AB US 3379790 A UPAB: 19930831

Resinous transparent polycarbonate-polysiloxane copolymers are prepared by heating for more than 1 hr. at 150-220 deg.C., (i) a high polymeric polycarbonate and (ii) a hydrocarbon substd. polysiloxane having ca. 1.5 alkyl or aryl substituents per Si atom and having 2-4 weight% Si-bonded hydroxyl groups.

Polysiloxane is used in an amount of at least 50 weight% based on total reactants. Polycarbonate is prepared by reacting (a) aromatic dihydroxy cpd. with dialkyl or diaryl esters of carbonic acid or **phosgene**, or (b) bis (chlorocarbonic acid) esters of aromatic dihydroxy cpds. with aromatic, aliphatic or cyclo-aliphatic di-hydroxy cpds. Polyesters contng. OH gps. can also be present in the reaction mixture the weight ratio polycarbonate:polyester being 9:1-1:3. The products can be hardened with **isocyanates**.

In the production of pressed masses (e.g. **glass** fabric) and in lacquers. They have good heat and water resistance. Surface hardness is also improved as compared with polysiloxanes.

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
91.02	91.23

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-7.62	-7.62

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	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

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=> e silane/cn 5

E1	1	SILANDRIN ACETATE/CN
E2	1	SILANDRONE/CN
E3	1 -->	SILANE/CN
E4	1	SILANE (28SIH2D2)/CN
E5	1	SILANE (28SIH3D)/CN

=> s e3

L1	1	SILANE/CN
----	---	-----------

=> e aminosilane/cn 5

E1	1	AMINOSIDINE, PENTAACETATE/CN
E2	1	AMINOSIDINE, PENTAKIS(SULFOMETHYL)-, PENTASODIUM SALT/CN
E3	1 -->	AMINOSILANE/CN
E4	1	AMINOSILICA 1/CN
E5	1	AMINOSILICONE A/CN

=> s e3;e phosgene/cn 5

L2	1	AMINOSILANE/CN
----	---	----------------

E1	1	PHOSGARD XC 2000L/CN
E2	1	PHOSGEN/CN
E3	1 -->	PHOSGENE/CN
E4	1	PHOSGENE (2,5-DICHLOROPHENYL) HYDRAZONE/CN
E5	1	PHOSGENE DIMER/CN

=> s e3;e carbonyl diimidazole/cn 5

L3	1	PHOSGENE/CN
----	---	-------------

E1	1	CARBONYL DIFLUORIDE/CN
E2	1	CARBONYL DIFLUORIDE (COF2)/CN
E3	0 -->	CARBONYL DIIMIDAZOLE/CN

Searched by: Mary Hale 571-272-2507 REM 1D86

E4 1 CARBONYL DIIODIDE/CN
E5 1 CARBONYL DIISOCYANATE/CN

=> e ketoxime carbonate/cn

E1 1 KETOVITE, TABLETS/CN
E2 1 KETOXAL/CN
E3 0 --> KETOXIME CARBONATE/CN
E4 1 KETOYOBIRINE/CN
E5 1 KETRAX/CN
E6 1 KETRON 1000/CN
E7 1 KETRUL A 210/CN
E8 1 KETS/CN
E9 1 KETTENGLATTE D-80/CN
E10 1 KETTIN (BOMBYX MORI CLONE ADD4 GENE BM KETTIN FRAGMENT)/CN
E11 1 KETTIN (CAENORHABDITIS ELEGANS)/CN
E12 1 KETTIN (DROSOPHILA MELANOGASTER CLONE DS07136 GENE KETTIN)/C
N

=> e "1,1-carbonyldiimidazole"/cn 5

E1 1 1,1-BUTANEDITHIOL, 3-METHYL-1-(1H-PYRROL-1-YL)-/CN
E2 1 1,1-BUTANEDITHIOL, 4-CHLORO-1-(DIMETHYLPHENYLSILYL)-/CN
E3 0 --> 1,1-CARBONYLDIIMIDAZOLE/CN
E4 1 1,1-CYCLOBUTANE-1-13C-DICARBOXYLIC ACID/CN
E5 1 1,1-CYCLOBUTANE-1-14C-DICARBOXYLIC ACID, DIETHYL ESTER/CN

=> e methyl ethyl ketoxime carboate/cn 5

E1 1 METHYL ETHYL KETONE-STYRENE COMPLEX (1:1)/CN
E2 1 METHYL ETHYL KETOXIME/CN
E3 0 --> METHYL ETHYL KETOXIME CARBOATE/CN
E4 1 METHYL ETHYL MALONATE/CN
E5 1 METHYL ETHYL METHYLHYDROXYMALONATE/CN

=> e isocyaate/cn 5

E1 1 ISOCURICYCLEATJINE/CN
E2 1 ISOCURINE/CN
E3 0 --> ISOCYAATE/CN
E4 1 ISOCYANAMIDE/CN
E5 1 ISOCYANAMIDE, ((4-METHOXYPHENYL)METHYLENE)-/CN

=> e isocyanate/cn 5

E1 6 ISOCYANAMIDE, TUNGSTEN DERIV./CN
E2 1 ISOCYANAMIDE-D/CN
E3 2 --> ISOCYANATE/CN
E4 1 ISOCYANATE 174/CN
E5 1 ISOCYANATE 580/CN

=> s e3

L4 2 ISOCYANATE/CN

=> fil medl,hcaplus,biosis,embase,jicst;s (l1 or l2 or aminosilane or silane or
cyanoethyldimethyl(w)diethyl(w)aminosilane)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	19.82	20.03

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L5 1864 FILE MEDLINE
L6 88975 FILE HCAPLUS
L7 1044 FILE BIOSIS
L8 3536 FILE EMBASE
L9 6588 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L10 102007 (L1 OR L2 OR AMINOSILANE OR SILANE OR CYANOETHYLDIMETHYL(W)
DIETHYL(W) AMINOSILANE)

=> s l10 and (l3 or phosgene? or carbonic dichloride or carbonyl diimidazole or
ketoxime carbon? or carbonyldiimidazole? or methylethyl ketoxime carbon? or
methylethylketoxime?)

L11 2 FILE MEDLINE
L12 237 FILE HCAPLUS
L13 2 FILE BIOSIS
L14 5 FILE EMBASE
L15 2 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L16 248 L10 AND (L3 OR PHOSGENE? OR CARBONIC DICHLORIDE OR CARBONYL
DIIMIDAZOLE OR KETOXIME CARBON? OR CARBONYLDIIMIDAZOLE? OR METHY
LETHYL KETOXIME CARBON? OR METHYLETHYLKETOXIME?)

=> s l16 and glass(4a)(surface or sheet or vessel or slide)

L17 0 FILE MEDLINE
L18 3 FILE HCAPLUS
L19 0 FILE BIOSIS
L20 1 FILE EMBASE
L21 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L22 4 L16 AND GLASS(4A) (SURFACE OR SHEET OR VESSEL OR SLIDE)

=> s (l4 or isocyan?) and l16

L23 0 FILE MEDLINE
L24 27 FILE HCAPLUS
L25 0 FILE BIOSIS
L26 0 FILE EMBASE
L27 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L28 27 (L4 OR ISOCYAN?) AND L16

=> s l28 and glass

L29 0 FILE MEDLINE
L30 3 FILE HCAPLUS
L31 0 FILE BIOSIS
L32 0 FILE EMBASE
L33 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

Searched by: Mary Hale 571-272-2507 REM 1D86

L34 3 L28 AND GLASS

=> s 122 or 134

L35 0 FILE MEDLINE
L36 6 FILE HCAPLUS
L37 0 FILE BIOSIS
L38 1 FILE EMBASE
L39 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L40 7 L22 OR L34

=> dup rem 140

PROCESSING COMPLETED FOR L40

L41 6 DUP REM L40 (1 DUPLICATE REMOVED)

=> d 1-6 ibib abs;s 128 not 140

L41 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:189015 HCAPLUS

DOCUMENT NUMBER: 130:268244

TITLE: Reactive **silane**/silicone oil lubricating and parting material

INVENTOR(S): Torikoshi, Kaoru; Kobayashi, Tomoo; Kanazawa, Akio

PATENT ASSIGNEE(S): Fuji Xerox Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11071521	A2	19990316	JP 1998-2236	19980108
PRIORITY APPLN. INFO.:			JP 1997-166423	19970623

AB Title material, having a good adhesion and chemical bonding on **surface** of metal, ceramics, **glass**, plastics, rubber, paper, etc., useful for lubricating and releasing film in electrophotog. and printing, comprises a reactive **silane** and a silicone oil. Thus, an aluminum substrate was coated with zirconium compound 10 (Orgatix ZC540) and **silane** compound (A 1110) 40 parts, then polyvinyl butyral (Eslec BM-S)-glass beads, followed by a charge-transfer layer coat from 4,4'-[1,4-phenylenebis(1-methylethylidene)]bis(2-methylphenol)/**phosgene** copolymer 10, N,N'-diphenyl-N,N'-di-p-tolyl-benzidine 1 and tritolylamine 8 parts, and finally with a lubricating and parting coat from fluoro resin (Cefral Coat A 101B) 2, tetraisocyanatosilane 20, silicone disilane (YSR 3022) 2, and amino-modified silicone oil (TSF 4702) 18 parts to give a electrophotog. photosensitive material, which was tested in an electrostatic copying testing device, showing surface potential -820 V, half-reduction light exposure energy 7.3 erg·cm², and remaining potential -38 V after irradiation with 10 lx white light for 1 s.

L41 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE-1

ACCESSION NUMBER: 1999:356526 HCAPLUS

DOCUMENT NUMBER: 131:215072

TITLE: Adhesion mapping of chemically modified and poly(ethylene oxide)-grafted **glass surfaces**

AUTHOR(S): Jogikalmath, G.; Stuart, J. K.; Pungor, A.; Hlady, V.

CORPORATE SOURCE: Department of Bioengineering, Center for Biopolymers at Interfaces, University of Utah, Salt Lake City, UT,

Searched by: Mary Hale 571-272-2507 REM 1D86

USA
 SOURCE: Colloids and Surfaces, A: Physicochemical and
 Engineering Aspects (1999), 154(1-2), 53-64
 CODEN: CPEAEH; ISSN: 0927-7757
 PUBLISHER: Elsevier Science B.V.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB Two-dimensional mapping of the adhesion pull-off forces was used to study
 the origin of surface heterogeneity in the grafted poly(ethylene oxide)
 (PEO) layer. The variance of the pull-off forces measured over the
 μm -sized regions after each chemical step of modifying **glass**
surfaces was taken to be a measure of the surface chemical
 heterogeneity. The attachment of γ -glycidoxypolytrimethoxysilane
 (GPS) to glass decreased the pull-off forces relative to the clean
glass and made the **surface** more uniform. The subsequent
 hydrolysis of the terminal epoxide groups resulted in a larger surface
 heterogeneity which was modeled by two populations of the terminal
 hydroxyl groups, each with its own distribution of adhesion forces and
 force variance. The activation of the hydroxyls with carbonyldiimidazole
 (CDI) healed the surface and lowered its adhesion, however, the force
 variance remained rather large. Finally, the grafting of the
 α,ω -diamino poly(ethylene oxide) chains to the CDI-activated
 glass largely eliminated adhesion except at a few discrete regions. The
 adhesion on the PEO grafted layer followed the Poisson distribution of the
 pull-off forces. With the exception of the **glass**
surface, a correlation between the water contact angles and the
 mean pull-off forces measured with the Si₃N₄ tip surfaces was found for
 all modified **glass surfaces**.

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:429227 HCAPLUS
 DOCUMENT NUMBER: 119:29227
 TITLE: Room-temperature humidity-curable silicone resin
 compositions
 INVENTOR(S): Kobayashi, Hideki
 PATENT ASSIGNEE(S): Dow Corning Toray Silicone, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05059285	A2	19930309	JP 1991-244466	19910829
PRIORITY APPLN. INFO.:			JP 1991-244466	19910829
AB Title compns., giving water- and oil-repellent films, contain MenSiO(4-n-m)/2(OH)m (n = 0.80-1.80; m is defined based on OH content 0.01-10%) 100, HO[F(CF ₂)aC ₂ H ₄ SiMeO]bH (a \geq 4; b \geq 2) 0.5-50, RcSiX ₄ -c [R = Me, F(CF ₂)aC ₂ H ₄ ; c = 0, 1, 2; X = humidity-hydrolyzable groups] or its partial hydrolysis condensates 1-90 parts, and curing catalysts. Thus, a solution containing polymethylsiloxane 10, HO[F(CF ₂)4C ₂ H ₄ SiMeO]25H 1, methyltri(methylethylketoxime) silane 5.3, and dibutyltin diacetate 0.2 g was applied on a glass sheet and cured at room temperature for 1 wk to give a film with contact angle 114° for H ₂ O and 62° for C ₁₆ H ₃₄ .				

L41 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1993:102737 HCAPLUS

Searched by: Mary Hale 571-272-2507 REM 1D86

DOCUMENT NUMBER: 118:102737
TITLE: A study of polyurethanes synthesized from an arylsilane, bis(4,4'-phenylisocyanato)dimethylsilane, and its carbon analog, 2,2-bis(4,4'-phenylisocyanato)propane
AUTHOR(S): Thames, S. F.; Malone, K. G.
CORPORATE SOURCE: Polym. Sci. Dep., Univ. South. Mississippi, Hattiesburg, MS, 39406, USA
SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1993), 31(1), 177-82
CODEN: JPACEC; ISSN: 0887-624X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Bis(4,4'-**isocyanatophenyl**)dimethylsilane and 2,2-bis(4,4'-**isocyanatophenyl**)propane were prepared and polymerized to polyurethanes, and their chemical, thermal, and phys. properties studied. NMR spectra confirm deshielding by Si of both the Ph ring and the urethane linkage. The **glass** transition temps., solubility parameters, and mech. properties were independent of the diisocyanates. The Si-containing polyurethanes were more thermally stable than their C counterparts.

L41 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:65829 HCAPLUS
DOCUMENT NUMBER: 118:65829
TITLE: Air contaminants
CORPORATE SOURCE: Occupational Safety and Health Administration, U. S. Dep. Labor, Washington, DC, 20210, USA
SOURCE: Federal Register (1992), 57(114, Bk. 2), 26002-601, 12 Jun 1992
CODEN: FEREC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Proposed amendments of existing air contaminant stds. for the maritime and construction industries and extension of air contaminant stds. to agricultural employees (only employees of farms with >10 nonfamily employees are covered) are given under the Federal Occupational Safety and Health Administration. Tables that indicated transitional limits, based on established threshold limit values, indication of skin protection needs, proposed time-weighted average exposure (any 8-h work shift for 40-h week), short-term exposure limit (15-min time-weighted average), ceiling (exposure during any part of the work day, or if instantaneous monitoring is not feasible, the 15-min time-weighted average), and/or skin protection needs are given for the shipyard, marine terminal and longshoring, construction, and agricultural industries. Extensive data on health effects of the substances to be regulated and preliminary regulatory impact analyses are given for general industry and the specific industrial sectors.

L41 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1965:446375 HCAPLUS
DOCUMENT NUMBER: 63:46375
ORIGINAL REFERENCE NO.: 63:8403g-h
TITLE: **Silanes** and siloxanes containing **isocyanate** groups
PATENT ASSIGNEE(S): Union Carbide Corp.
SOURCE: 12 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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NL 6410323	A	19650308	NL 1964-10323	19640904
BE 652572	A	19641231	BE 1964-652572	19640902
BE 727989	A	19690806	BE 1969-727989	19690206
PRIORITY APPLN. INFO.:			US 1963-307003	A 19630906
			US 1968-707365	A 19680207

GI For diagram(s), see printed CA Issue.

AB The title compds. are prepared by reaction of **silanes** with **phosgene**. Thus, 43 g. (4-H₂NC₆H₄SiMe₂)₂O in 100 cc. toluene was slowly added in 20 min. to 100 g. **phosgene** and 100 cc. toluene cooled to -20° in a 1-l. **glass** reactor. The mixture was heated to 110° under N, toluene evaporated, and the mixture distilled to give 70 mole-% (4-OCNC₆H₄SiMe₂)₂O, b_{0.09} 149-51°. II was similarly prepared from the corresponding amine in 98 mole-% yield. Also prepared were Me₃SiO[SiMe[(CH₂)₄NCO]O]_{3.7}(SiMe₂)₆₅SiMe₃ and [OCN(CH₂)₄SiMe₂]₂O. The products are useful for preparation of hydraulic fluids, laminated resins, elastomers, and adhesives.

L42 0 FILE MEDLINE
 L43 24 FILE HCAPLUS
 L44 0 FILE BIOSIS
 L45 0 FILE EMBASE
 L46 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L47 24 L28 NOT L40

=> s 147 and (end cap? amino or amino or end cap?)

L48 0 FILE MEDLINE
 L49 6 FILE HCAPLUS
 L50 0 FILE BIOSIS
 L51 0 FILE EMBASE
 L52 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L53 6 L47 AND (END CAP? AMINO OR AMINO OR END CAP?)

=> d 1-6 ibib abs;s 147 not 153

L53 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:151074 HCAPLUS

DOCUMENT NUMBER: 138:303801

TITLE: Radical Ring Closures of 4-Isocyanato
 Carbon-Centered Radicals

AUTHOR(S): Minin, Patricia L.; Walton, John C.

CORPORATE SOURCE: School of Chemistry, University of St. Andrews, St.
 Andrews Fife, KY16 9ST, UK

SOURCE: Journal of Organic Chemistry (2003), 68(7), 2960-2963
 CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:303801

AB The 2-(2-**isocyanatophenyl**)ethyl radical was generated from the corresponding bromide with tributyltin and tris(trimethylsilyl)silyl radicals and shown to ring close in the 6-endo-mode to afford 3,4-dihydro-1H-quinolin-2-one as the major product. Cyclization in the 5-exo-mode to produce 2,3-dihydroindole-1-carbaldehyde, after H abstraction, was a minor reaction. Rate consts. for the two processes were estimated and compared with reaction enthalpies computed by the DFT

method.
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L53 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:425891 HCAPLUS
DOCUMENT NUMBER: 131:88345
TITLE: Method for continuous preparation of low-color
isocyanurate group-containing polyisocyanates
based on 1-**isocyanato**-3,3,5-trimethyl-5-(
isocyanatomethyl)cyclohexane (IPDI)
INVENTOR(S): Kohlstruk, Stephan; Jansen, Volker; Lomoelder, Rainer
PATENT ASSIGNEE(S): Huels A.-G., Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19758050	A1	19990701	DE 1997-19758050	19971229
EP 927731	A2	19990707	EP 1998-121611	19981111
EP 927731	A3	20001213		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11310625	A2	19991109	JP 1998-374522	19981228
US 6093817	A	20000725	US 1998-222733	19981229
PRIORITY APPLN. INFO.:		DE 1997-19758050 A 19971229		
OTHER SOURCE(S):		MARPAT 131:88345		
AB Low-color isocyanurate group-containing polyisocyanates having a free NCO group content of 10-22% and a residual monomer content of <0.7% are continuously prepared by partial trimerization of 1- isocyanato - 3,3,5-trimethyl-5- isocyanatomethylcyclohexane (IPDI) having a total Cl content of <80 mg/kg in the presence of a catalyst. A phosgene -free process is used to produce IPDI with a low chlorine content. Suitable trimerization catalysts include tertiary amines, phosphines, alkali phenolates, aminosilanes , quaternary ammonium comps., and alkali metal or Sn, Zn or Pb salts of alkylcarboxylic acids. The isocyanurate group-containing polyisocyanates are especially useful as the polyisocyanate component in 1- and 2-component systems for the preparation of weather- and light-resistant polyurethane lacquers.				

L53 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:134166 HCAPLUS
DOCUMENT NUMBER: 126:150559
TITLE: Waterless presensitized lithographic plate containing
quinonediazide compounds having silyl groups and
printing plate therefrom
INVENTOR(S): Goto, Kazuoki; Kokuni, Masahiro; Suezawa, Mitsuru
PATENT ASSIGNEE(S): Toray Industries, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08305008	A2	19961122	JP 1995-106565	19950428

JP 3414046 B2 20030609

PRIORITY APPLN. INFO.: JP 1995-106565 19950428

AB The lithog. plate comprises a support, a photosensitive layer, and a silicone rubber layer, and the photosensitive layer contains ≥ 1 (A) quinonediazide compds. having ≥ 1 SiRnX3-n [$n = 0-3$; $R = \text{alkyl, alkenyl, aryl}$ which may be substituted with halo, **isocyanato**, epoxy, **amino**, OH, alkoxy, aryloxy, (meth)acryloxy, SH; $X =$ functional group] and ≥ 1 R1OH [$\text{R1} = \text{S, (un)substituted N, (un)substituted C, (un)substituted Si}$] and ≥ 1 (B) quinonediazide compds. having ≥ 1 SiRnX3-n and ≥ 1 ArR2R3R4R5OH ($\text{Ar} = \text{aromatic ring; R2-5} = \text{substituent}$). The presensitized plate with specified tensile characteristics of the photosensitive layer after exposure and a waterless lithog. plate prepared from the presensitized plate are also claimed. These quinonediazide compds. improve adhesion strength between the silicone rubber layer and the photosensitive layer. The presensitized plates have scratch resistance and storage stability, and provides good image reproducibility and printing durability.

L53 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:112788 HCAPLUS

DOCUMENT NUMBER: 126:124827

TITLE: Waterless presensitized lithographic plate containing quinonediazide compounds having silyl groups and printing plate therefrom

INVENTOR(S): Goto, Kazuoki; Kokuni, Masahiro; Suezawa, Mitsuru

PATENT ASSIGNEE(S): Toray Industries, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08305009	A2	19961122	JP 1995-106566	19950428
JP 3414047	B2	20030609		

PRIORITY APPLN. INFO.: JP 1995-106566 19950428

AB The lithog. plate comprises a support, a photosensitive layer, and a silicone rubber layer, and the photosensitive layer contains ≥ 1 quinonediazide compds. having ≥ 1 SiRnX3-n [$n = 0-3$; $R = \text{alkyl, alkenyl, aryl}$ which may be substituted with halo, **isocyanato**, epoxy, **amino**, OH, alkoxy, aryloxy, (meth)acryloxy, SH, etc.; $X =$ functional group], ≥ 1 R1OH [$\text{R1} = \text{S, (un)substituted N, (un)substituted C, (un)substituted Si}$], and ≥ 1 ArR2R3R4R5OH ($\text{Ar} = \text{aromatic ring; R2-5} = \text{substituent}$). The lithog. plate with specified tensile characteristics of the photosensitive layer after exposure and a printing plate prepared from the presensitized plate are also claimed. The quinonediazide compds. improve adhesion strength between the silicone rubber layer and the photosensitive layer. The lithog. plate is storage-stable and provides good image reproducibility and printing durability.

L53 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:135528 HCAPLUS

DOCUMENT NUMBER: 116:135528

TITLE: Performance-oriented packaging standards; changes to classification, hazard communication, packaging and handling requirements based on UN standards and agency initiative

CORPORATE SOURCE: United States Dept. of Transportation, Washington, DC, 20590-0001, USA

SOURCE: Federal Register (1990), 55(246), 52402-729, 21 Dec 1990
CODEN: FEREAC; ISSN: 0097-6326

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The hazardous materials regulations under the Federal Hazardous Materials Transportation Act are revised based on the United Nations recommendations on the transport of dangerous goods. The regulations cover the classification of materials, packaging requirements, and package marking, labeling, and shipping documentation, as well as transportation modes and handling, and incident reporting. Performance-oriented stds. are adopted for packaging for bulk and nonbulk transportation, and SI units of measurement generally replace US customary units. Hazardous material descriptions and proper shipping names are tabulated together with hazard class, identification nos., packing group, label required, special provisions, packaging authorizations, quantity limitations, and vessel stowage requirements.

L53 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1973:72900 HCAPLUS

DOCUMENT NUMBER: 78:72900

TITLE: Synthesis and modification of aromatic polysiloxanes

AUTHOR(S): Bonnet, Jean Claude; Marechal, Ernest

CORPORATE SOURCE: Inst. Natl. Super. Chim. Ind. Rouen, Rouen, Fr.

SOURCE: Bulletin de la Societe Chimique de France (1972), (9), 3561-79

CODEN: BSCFAS; ISSN: 0037-8968

DOCUMENT TYPE: Journal

LANGUAGE: French

AB Poly(methylphenylsiloxane) [(SiMePhO)_n, n = 5.2-5.4] was treated with various reagents, to form functional substituents on the phenyl groups to allow crosslinking of the siloxane chains. Disiloxane monomers, e.g. 1,3-bis(4-carboxyphenyl)tetramethyldisiloxane (I) [18054-10-9], were also prepared and polymerized with comonomers. Thus, I was treated with Ac₂O and HNO₃ to form the nitro derivative which was reduced to form the amino derivative. The amino derivative was reacted with a diisocyanate crosslinking agent to form 3-dimensional polymers. I was also copolymd. with H₂N(CH₂)₆NH₂ to give polymer (II) [37702-53-7].

L54 0 FILE MEDLINE

L55 18 FILE HCAPLUS

L56 0 FILE BIOSIS

L57 0 FILE EMBASE

L58 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L59 18 L47 NOT L53

=> s 159 and (biolog? molecule or protein or amino acid or peptide)

L60 0 FILE MEDLINE

L61 0 FILE HCAPLUS

L62 0 FILE BIOSIS

L63 0 FILE EMBASE

L64 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L65 0 L59 AND (BIOLOG? MOLECULE OR PROTEIN OR AMINO ACID OR PEPTIDE)

=> s 159 and amino?

L66 0 FILE MEDLINE

Searched by: Mary Hale 571-272-2507 REM 1D86

L67 5 FILE HCAPLUS
L68 0 FILE BIOSIS
L69 0 FILE EMBASE
L70 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L71 5 L59 AND AMINO?

=> d 1-5 ibib abs;s somporam, s?/au or somporam s?/au

L71 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:96012 HCAPLUS

DOCUMENT NUMBER: 132:137818

TITLE: Production of macromonomer with two or more
polycondensable equally reactive functional groups
from carboxyl- or hydroxyl-containing prepolymer
INVENTOR(S): Ramanathan, Lalgudi Srinivasan; Sivaram, Swaminathan
PATENT ASSIGNEE(S): Council of Scientific & Industrial Research, India
SOURCE: U.S., 5 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6022930	A	20000208	US 1998-143028	19980828
PRIORITY APPLN. INFO.:			IN 1998-DE1635	19980612

AB A process for producing a title macromonomer -
R1[C(COOR)CH2]nXR2C(O)OC(F)m, where R is C1-40 alkyl; R1 is H or Me; R2 is
alkylene; X is bifunctional moiety; F is a functional group; n = 3-45; and
m ≥ 2, comprises (a) preparing a carboxyl- or hydroxyl-terminated
prepolymer by polymerizing a monomer such as Me methacrylate in the presence of
a bifunctional agent such as mercaptoacetic acid or 2-mercaptoethanol; (b)
reacting the prepolymer with an organic compound containing two or more
isocyanate reactive functional groups in the presence of a
dehydrating agent such as dicyclohexylcarbodiimide and a nonreactive organic
solvent; and (c) separating the product from the reaction mixture The
prepolymer
can be esterified directly with a multifunctional organic compound such as
trimethylolpropane. The macromonomers may be useful in the production of
tailored graft copolymers and as surface active agents, compatibilizers,
adhesion promoters, organic coatings and biopolymers (no data).

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L71 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:653896 HCAPLUS

DOCUMENT NUMBER: 127:277920

TITLE: Synthesis and properties of novel
dialkylaminocarbenium salts

AUTHOR(S): Sheludyakov, V. D.; Belyakova, Z. V.; Shevchenko, V.
M.; Chernyshev, E. A.

CORPORATE SOURCE: State Scientific Center of the Russian Federation,
"State Scientific Research Institute of Chemistry and
Technology of Organoelement Compounds", Moscow,
111123, Russia

SOURCE: Russian Chemical Bulletin (Translation of Izvestiya
Akademii Nauk, Seriya Khimicheskaya) (1997), 46(5),
997-1002
CODEN: RCBUEY; ISSN: 1066-5285

Searched by: Mary Hale 571-272-2507 REM 1D86

PUBLISHER: Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:277920

AB Novel dialkylaminocarbenium salts, e.g., [(Me₂N)₂CH]₂+CoCl₄²⁻ or [(Me₂N)₂CCl]_x+ MCl_y^{x-} (M = Ca, Cu, n = x = 2, y = 4; M = Mo, n = 5, x = 3, y = 8; M = Y, n = 3, x = 1, y = 4), with metallo-complex counterions were prepared by the reaction of **phosgene** with either DMF or tetramethylurea in the presence of metal chlorides. Reactions of organosilicon amides with **phosgene** gave corresponding carbenium salts, while organosilicon ureas yielded **aminoiminocarbenium** salts. Dialkylamino-chlorocarbenium salts were reduced with hydrosilanes to give dialkylaminocarbenium salts and can be easily hydrolyzed to afford either amides or ureas. Pathways of the reaction with H₂O and alcs. depend on the nature of reagent and the reaction conditions.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L71 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1997:80364 HCAPLUS
DOCUMENT NUMBER: 126:96969
TITLE: Waterless lithographic original plate and printing plate therefrom
INVENTOR(S): Goto, Kazuoki; Yanagida, Shunichi; Isono, Masanao
PATENT ASSIGNEE(S): Toray Industries, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08286364	A2	19961101	JP 1995-92823	19950418

PRIORITY APPLN. INFO.: JP 1995-92823 19950418

AB The title plate comprises a support laminated with a photosensitive layer containing a quinonediazide compound having ≥ 1 SiR_nX_{3-n} group(s) [n = 0-3; R = alkyl, alkenyl, aryl, group made up their combinations (these groups may be substituted with halo, **isocyanate**, epoxy, NH₂, OH, alkoxy, aryloxy, (meth)acryloxy, or SH); X = functional group] [and having ≥ 1 substituted aromatic ring group(s)] and a silicone rubber layer in this order. The photosensitive layer has an initial elastic modulus 5-75 Kgf/mm² after exposure. The quinonediazide compound may be a naphthoquinonediazidosulfonate ester, and the photosensitive layer may have fracture elongation $\geq 5\%$ and 10% stress 0.05-3.0 Kgf/mm² after exposure, contain a binder polymer, and be a photorelease layer. A waterless lithog. printing plate, prepared by selective exposure of the original plate, is also claimed. The original plate shows good image-reproducibility, printing durability, and storage stability. Thus, a lithog. original plate was prepared by using a photosensitive layer containing phenol-HCHO novolak resin 1,2-naphthoquinone-2-diazido-5-sulfonate (I), reaction product of I with 3-**aminopropyltriethoxysilane**, Sanprene LQ-T 1331 (polyurethane), and additives and a silicone rubber layer.

L71 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1994:662443 HCAPLUS
DOCUMENT NUMBER: 121:262443
TITLE: French limiting values for occupational exposure to chemicals

AUTHOR(S): Anon.
CORPORATE SOURCE: Fr.
SOURCE: Cahiers de Notes Documentaires (1993), 153, 557-74
CODEN: CNDIBJ; ISSN: 0007-9952
DOCUMENT TYPE: Journal
LANGUAGE: French
AB Limit values (suggested limiting values and maximum permissible values) for occupational exposure to chems., including carcinogens, which have been published by the French Labor Ministry are presented in one table. This table is preceded by information on the following points: monitoring of workplace atmospheres (sampling and anal.; aerosols); permitted values (definitions and aims; additivity convention; elements and compds.; limiting occupational exposure values; carcinogens); mandatory values; and values recommended by the French National Health Insurance Fund (CNAM).

L71 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:218230 HCAPLUS
DOCUMENT NUMBER: 110:218230
TITLE: Air contaminants
CORPORATE SOURCE: United States Occupational Safety and Health
Administration, Washington, DC, 20210, USA
SOURCE: Federal Register (1989), 54(12, Bk. 2), 2332-983, 19
Jan 1989
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Under the Federal Occupational Safety and Health act, OSHA is amending existing air containment stds. and setting new permissible exposure limits for toxic substances commonly used in the workplace.

L72 0 FILE MEDLINE
L73 0 FILE HCAPLUS
L74 0 FILE BIOSIS
L75 0 FILE EMBASE
L76 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES
L77 0 SOMPORAM, S?/AU OR SOMPORAM S?/AU

=> s (sompuram, s? or sompuram s?)/au

L78 14 FILE MEDLINE
L79 15 FILE HCAPLUS
L80 14 FILE BIOSIS
L81 13 FILE EMBASE
L82 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES
L83 56 (SOMPURAM, S? OR SOMPURAM S?)/AU

=> s ramanathan, h?/au or ramanathan h?/au

L84 3 FILE MEDLINE
L85 32 FILE HCAPLUS
L86 12 FILE BIOSIS
L87 6 FILE EMBASE
L88 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES
L89 53 RAMANATHAN, H?/AU OR RAMANATHAN H?/AU

=> s 183 and 189

Searched by: Mary Hale 571-272-2507 REM 1D86

L90 3 FILE MEDLINE
L91 4 FILE HCAPLUS
L92 4 FILE BIOSIS
L93 4 FILE EMBASE
L94 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L95 15 L83 AND L89

=> s 195 and (11 or silane or siloxane or 12 or aminosilane) and (13 or phosgene)

L96 0 FILE MEDLINE
L97 0 FILE HCAPLUS
L98 0 FILE BIOSIS
L99 0 FILE EMBASE
L100 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L101 0 L95 AND (L1 OR SILANE OR SILOXANE OR L2 OR AMINOSILANE) AND (L3 OR PHOSGENE)

=> dup rem 195

PROCESSING COMPLETED FOR L95

L102 5 DUP REM L95 (10 DUPLICATES REMOVED)

=> d 1-5 chib abs

L102 ANSWER 1 OF 5 MEDLINE on STN

DUPLICATE 1

2004067781. PubMed ID: 14769336. A water-stable protected isocyanate glass array substrate. **Sompuram Seshi R**; Vani Kodela; Wei Lan; **Ramanathan Halasya**; Olken Sarah; Bogen Steven A. (Medical Discovery Partners LLC, 715 Albany St., Boston, MA 02118, USA.. sompuram@md-partners.com) . Analytical biochemistry, (2004 Mar 1) 326 (1) 55-68. Journal code: 0370535. ISSN: 0003-2697. Pub. country: United States. Language: English.

AB We describe the performance of a new glass attachment chemistry for arrays that is particularly well suited to attachment of small molecules, such as peptides. The attachment chemistry is a protected isocyanate (PI) group. Isocyanate groups are well suited to serving as a glass coating for arrays, in that they are highly reactive with many different types of biological compounds. However, they are generally so reactive as to be unstable. The new feature of the PI slide coating is its stability. It can withstand immersion in water without loss of reactivity and has at least a 1-year shelf life. The high reactivity of the PI group results in a rapid coupling reaction ([Formula: see text] 15min) and is particularly useful for attaching small molecules, such as peptides. Since isocyanates bind to both amines (forming a urea linkage) and hydroxyl groups (forming a carbamate bond), we tested the ability of the PI coating to bind to a wide variety of compounds. We found that the PI slide coating can directly attach to peptides, proteins, carbohydrates, lipooligosaccharides, and DNA. The sensitivity of detection for these compounds is comparable to that of other previously published array substrates.

L102 ANSWER 2 OF 5 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
DUPLICATE 2

2003:426615 Document No.: PREV200300426615. A novel microscope slide adhesive for poorly adherent tissue sections. **Sompuram, Seshi R.** [Reprint Author]; McMahon, Deirdre; Vani, Kodela; **Ramanathan, Halasya**; Bogen, Steven A.. Department of Pathology and Laboratory Medicine, Medical Discovery Partners LLC, Boston Medical Center, 80 E. Concord Street, Boston, MA, 02118, USA. sompuram@md-partners.com. Journal of Histotechnology, (June 2003) Vol. 26, No. 2, pp. 117-123. print.

CODEN: JOHIDN. ISSN: 0147-8885. Language: English.

AB We describe a protected isocyanate (PI) microscope slide-coating technology that significantly enhances tissue section adhesion. This technology is particularly useful for problematic tissue sections that detach during staining. The glass slide coating is unique in that it involves a highly reactive covalent coupling to cellular proteins. Namely, we coat the slides with a modified isocyanate group capable of binding to amine, hydroxyl, and carboxylic functionalities on cells and tissue sections. This contrasts to presently available slide coatings, which primarily provide a weak charge interaction with tissue proteins. We compared the tissue adhesiveness of our isocyanate-coated slides to commercially available aminosilane ("plus"), poly-L-lysine, and polysineTM slides. Serial tissue sections were mounted on PI-coated slides versus one of the other existing coatings and treated in an otherwise-identical manner for staining. In instances where tissue adhesion was problematic, PI-coated slides produced better tissue retention almost every time. The difference was sometimes dramatic and of significant diagnostic value. We believe that this technology can be useful for capturing tissue sections that otherwise will not adhere well to glass slides.

L102 ANSWER 3 OF 5 MEDLINE on STN DUPLICATE 3
2002657612. PubMed ID: 12417607. A novel quality control slide for quantitative immunohistochemistry testing. **Sompuram Seshi R**; Kodela Vani; Zhang Keming; **Ramanathan Halasya**; Radcliffe Gail; Falb Peter; Bogen Steven A. (CytoLogix Corporation, Cambridge, Massachusetts 02139, USA.. ssompuram@cytologix.com). journal of histochemistry and cytochemistry : official journal of the Histochemistry Society, (2002 Nov) 50 (11) 1425-34. Journal code: 9815334. ISSN: 0022-1554. Pub. country: United States. Language: English.

AB We introduce a novel quality control technology that may improve intra- and interlaboratory immunohistochemistry (IHC) standardization. The technology involves the creation of standardized antibody targets that are attached to the same slides as the patient sample. After IHC staining, the targets turn the same color as the stained cells or tissue elements. Unlike current clinical practice, our proposed targets are neither cells nor tissue sections. To create reproducible standards that are available in unlimited supply, we use short constrained peptides as antibody targets. These peptides are attached directly to the glass slide. We show that these peptides simulate the portion of the native antigen to which the antibody binds. They are useful in detecting subtle changes in IHC staining efficacy. Moreover, the peptides do not degrade after deparaffinization or antigen retrieval treatments. This technology may be valuable in creating nationally standardized controls to quantify IHC analytical variability.

L102 ANSWER 4 OF 5 MEDLINE on STN DUPLICATE 4
2002125998. PubMed ID: 11861433. Synthetic peptides identified from phage-displayed combinatorial libraries as immunodiagnostic assay surrogate quality-control targets. **Sompuram Seshi R**; Kodela Vani; **Ramanathan Halasya**; Wescott Charles; Radcliffe Gail; Bogen Steven A. (CytoLogix Corporation, 99 Erie St., Cambridge, MA 02139, USA.. ssompuram@cytologix.com). Clinical chemistry, (2002 Mar) 48 (3) 410-20. Journal code: 9421549. ISSN: 0009-9147. Pub. country: United States. Language: English.

AB BACKGROUND: Quantitative immunohistochemical (IHC) assays currently lack optimal reference quality-control material for cellular protein targets. To address this problem, we identified peptides that mimic the site on the native analyte to which the primary (monoclonal) antibody binds and used them as surrogate peptide controls. METHODS: We identified peptide candidates from a combinatorial peptide phage-display library that mimic the epitope for the 1D5 estrogen receptor (ER) monoclonal antibody (mAb). The peptide inserts of the phage clones were sequenced. Several

phage-encoded peptides were then synthesized and analyzed for affinity and specificity. RESULTS: We identified phage clones that specifically bound to the ER 1D5 mAb. The binding was specific, in that the phage clones did not bind to two other isotype-matched mAbs. Their ability to bind the ER 1D5 mAb was related to the presence of a consensus sequence. Binding analysis revealed a $K(d)$ of $8.3 \times 10(-8)$ mol/L. The peptide was not recognized by any of 15 other mAbs commonly used for clinical IHC testing. Moreover, the peptide was able to inhibit the binding of ER 1D5 mAb to native ER, indicating that the peptide bound to ER 1D5 mAb at or close to the antigen-binding site. CONCLUSIONS: Surrogate peptide controls behave like the native analyte in terms of affinity and specificity. This technology may be especially useful when the native analyte is in short supply.

L102 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN
 2000:742366 Document No. 133:293178 Quality control for cytochemical assays.
 Bogen, Steven A.; Radcliffe, Gail E.; Sompuram, Seshi R.;
 Ramanathan, Halasya (Cytologix Corporation, USA). PCT Int. Appl.
 WO 2000062064 A2 20001019, 75 pp. DESIGNATED STATES: W: AU, CA, JP; RW:
 AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE.
 (English). CODEN: PIXXD2. APPLICATION: WO 2000-US10268 20000414.
 PRIORITY: US 1999-291351 19990414.
 AB The invention describes quality control devices for assays that measure
 analytes in cells and tissue samples, and methods of use thereof. In
 particular, the quality control device comprises a matrix affixed with
 synthetic controls in different concns., or different synthetic controls.
 The quality control device can be adhered to a microscope slide via an
 adhesive or chemical attached to a microscope slide and processed
 simultaneously with a tissue sample.

=> s (l1 or silane or siloxane or l2 or aminosilane) and (l3 or phosgene)

L103 0 FILE MEDLINE
 L104 433 FILE HCAPLUS
 L105 0 FILE BIOSIS
 L106 2 FILE EMBASE
 L107 2 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L108 437 (L1 OR SILANE OR SILOXANE OR L2 OR AMINOSILANE) AND (L3 OR PHOSG
 ENE)

=> s l108 and glass

L109 0 FILE MEDLINE
 L110 74 FILE HCAPLUS
 L111 0 FILE BIOSIS
 L112 0 FILE EMBASE
 L113 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L114 74 L108 AND GLASS

=> s (cytochemi? or assay) and l114

L115 0 FILE MEDLINE
 L116 0 FILE HCAPLUS
 L117 0 FILE BIOSIS
 L118 0 FILE EMBASE
 L119 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L120 0 (CYTOCHEMI? OR ASSAY) AND L114

=> s (183 or 189) and 1114
L121 0 FILE MEDLINE
L122 0 FILE HCAPLUS
L123 0 FILE BIOSIS
L124 0 FILE EMBASE
L125 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L126 0 (L83 OR L89) AND L114

=> dis his

(FILE 'HOME' ENTERED AT 08:49:57 ON 09 APR 2004)

FILE 'REGISTRY' ENTERED AT 08:50:12 ON 09 APR 2004

E SILANE/CN 5
L1 1 S E3
E AMINOSILANE/CN 5
L2 1 S E3
E PHOSGENE/CN 5
L3 1 S E3
E CARBONYL DIIMIDAZOLE/CN 5
E KETOXIME CARBONATE/CN
E "1,1-CARBONYLDIIMIDAZOLE"/CN 5
E METHYL ETHYL KETOXIME CARBOATE/CN 5
E ISOCYAATE/CN 5
E ISOCYANATE/CN 5
L4 2 S E3

FILE 'MEDLINE, HCAPLUS, BIOSIS, EMBASE, JICST-EPLUS' ENTERED AT 08:53:18
ON 09 APR 2004

L5 1864 FILE MEDLINE
L6 88975 FILE HCAPLUS
L7 1044 FILE BIOSIS
L8 3536 FILE EMBASE
L9 6588 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L10 102007 S (L1 OR L2 OR AMINOSILANE OR SILANE OR CYANOETHYLDIMETHYL(W)DI
L11 2 FILE MEDLINE
L12 237 FILE HCAPLUS
L13 2 FILE BIOSIS
L14 5 FILE EMBASE
L15 2 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L16 248 S L10 AND (L3 OR PHOSGENE? OR CARBONIC DICHLORIDE OR CARBONYL D
L17 0 FILE MEDLINE
L18 3 FILE HCAPLUS
L19 0 FILE BIOSIS
L20 1 FILE EMBASE
L21 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L22 4 S L16 AND GLASS(4A) (SURFACE OR SHEET OR VESSEL OR SLIDE)
L23 0 FILE MEDLINE
L24 27 FILE HCAPLUS
L25 0 FILE BIOSIS
L26 0 FILE EMBASE
L27 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L28 27 S (L4 OR ISOCYAN?) AND L16
L29 0 FILE MEDLINE
L30 3 FILE HCAPLUS
L31 0 FILE BIOSIS

Searched by: Mary Hale 571-272-2507 REM 1D86

L32 0 FILE EMBASE
 L33 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L34 3 S L28 AND GLASS
 L35 0 FILE MEDLINE
 L36 6 FILE HCAPLUS
 L37 0 FILE BIOSIS
 L38 1 FILE EMBASE
 L39 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L40 7 S L22 OR L34
 L41 6 DUP REM L40 (1 DUPLICATE REMOVED)
 L42 0 FILE MEDLINE
 L43 24 FILE HCAPLUS
 L44 0 FILE BIOSIS
 L45 0 FILE EMBASE
 L46 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L47 24 S L28 NOT L40
 L48 0 FILE MEDLINE
 L49 6 FILE HCAPLUS
 L50 0 FILE BIOSIS
 L51 0 FILE EMBASE
 L52 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L53 6 S L47 AND (END CAP? AMINO OR AMINO OR END CAP?)
 L54 0 FILE MEDLINE
 L55 18 FILE HCAPLUS
 L56 0 FILE BIOSIS
 L57 0 FILE EMBASE
 L58 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L59 18 S L47 NOT L53
 L60 0 FILE MEDLINE
 L61 0 FILE HCAPLUS
 L62 0 FILE BIOSIS
 L63 0 FILE EMBASE
 L64 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L65 0 S L59 AND (BIOLOG? MOLECULE OR PROTEIN OR AMINO ACID OR PEPTIDE
 L66 0 FILE MEDLINE
 L67 5 FILE HCAPLUS
 L68 0 FILE BIOSIS
 L69 0 FILE EMBASE
 L70 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L71 5 S L59 AND AMINO?
 L72 0 FILE MEDLINE
 L73 0 FILE HCAPLUS
 L74 0 FILE BIOSIS
 L75 0 FILE EMBASE
 L76 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L77 0 S SOMPORAM, S?/AU OR SOMPORAM S?/AU
 L78 14 FILE MEDLINE
 L79 15 FILE HCAPLUS
 L80 14 FILE BIOSIS
 L81 13 FILE EMBASE
 L82 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L83 56 S (SOMPURAM, S? OR SOMPURAM S?)/AU
 L84 3 FILE MEDLINE

L85 32 FILE HCAPLUS
 L86 12 FILE BIOSIS
 L87 6 FILE EMBASE
 L88 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L89 53 S RAMANATHAN, H?/AU OR RAMANATHAN H?/AU
 L90 3 FILE MEDLINE
 L91 4 FILE HCAPLUS
 L92 4 FILE BIOSIS
 L93 4 FILE EMBASE
 L94 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L95 15 S L83 AND L89
 L96 0 FILE MEDLINE
 L97 0 FILE HCAPLUS
 L98 0 FILE BIOSIS
 L99 0 FILE EMBASE
 L100 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L101 0 S L95 AND (L1 OR SILANE OR SILOXANE OR L2 OR AMINOSILANE) AND (
 L102 5 DUP REM L95 (10 DUPLICATES REMOVED)
 L103 0 FILE MEDLINE
 L104 433 FILE HCAPLUS
 L105 0 FILE BIOSIS
 L106 2 FILE EMBASE
 L107 2 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L108 437 S (L1 OR SILANE OR SILOXANE OR L2 OR AMINOSILANE) AND (L3 OR P
 L109 0 FILE MEDLINE
 L110 74 FILE HCAPLUS
 L111 0 FILE BIOSIS
 L112 0 FILE EMBASE
 L113 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L114 74 S L108 AND GLASS
 L115 0 FILE MEDLINE
 L116 0 FILE HCAPLUS
 L117 0 FILE BIOSIS
 L118 0 FILE EMBASE
 L119 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L120 0 S (CYTOCHEMI? OR ASSAY) AND L114
 L121 0 FILE MEDLINE
 L122 0 FILE HCAPLUS
 L123 0 FILE BIOSIS
 L124 0 FILE EMBASE
 L125 0 FILE JICST-EPLUS
 TOTAL FOR ALL FILES
 L126 0 S (L83 OR L89) AND L114
 => s 1114 not (128 or 140 or 153 or 159 or 171)
 L127 0 FILE MEDLINE
 L128 70 FILE HCAPLUS
 L129 0 FILE BIOSIS
 L130 0 FILE EMBASE
 L131 0 FILE JICST-EPLUS

TOTAL FOR ALL FILES

L132 70 L114 NOT (L28 OR L40 OR L53 OR L59 OR L71)

=> d 1-70 cbib abs

L132 ANSWER 1 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2004:157706 Document No. 140:182847 Fire-resistant color aromatic polycarbonate compositions and their moldings with high rigidity and bending strength. Sakuma, Toshiharu; Miyamoto, Akira (Asahi Kasei Chemical Corporation, Japan). Jpn. Kokai Tokkyo Koho JP 2004059690 A2 20040226, 27 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2002-218390 20020726.

AB The compns. comprise (A) aromatic polycarbonates 100, (B) other thermoplastic resins 0-40, (C) inorg. particles selected from needle-shape particles, plate-shape particles, and particles containing branched structures 0.01-3, (D) alkali metal salts and/or alkaline earth salts 0.0001-1, (E) reinforcing materials and/or fillers 5-200, and (F) ZnS 0.01-10 parts. Thus, a composition comprising bisphenol A polycarbonate, silicone-treated silica containing branched structures (Reolosil KS 20S), C4F9SO3K (Megafac F 114), **glass** fiber chopped strands (T 571), ZnS (Sachtolith HD-S), carbon black (RCF 50), a blue pigment (Macrolex Blue RR), a mixture of PTFE and acrylonitrile-styrene copolymer (Blendex 449), and other additives was injection-molded to give a test piece showing UL 94 fire resistance rating V0, tensile stress at break 101 MPa, bending strength 163 MPa, flexural modulus 8720 MPa, and Izod impact strength 8 kg-cm/cm.

L132 ANSWER 2 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2003:396964 Document No. 138:386358 Flame retardant polycarbonate compositions and their manufacture. Miebach, Thomas; Campbell, John Robert; Marugan, Monica M.; Ebeling, Thomas Arnold (General Electric Company, USA). PCT Int. Appl. WO 2003042305 A1 20030522, 73 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2002-US34785 20021029. PRIORITY: US 2001-15049 20011112.

AB Flame retardant resinous compns. comprise (i) ≥ 1 aromatic polycarbonate, (ii) ≥ 1 silicone source, (iii) ≥ 1 B source, and (iv) optionally ≥ 1 member selected from an antidrip agent, a second thermoplastic resin which is not a polycarbonate resin, stabilizer, and a rubber-modified graft copolymer. Thus, a blend of aromatic polycarbonate 67.96, graft ABS 12.5, resorcinol diphosphate 5.88, SAN 12.5, polycarbonate-**siloxane** copolymer 0.5, and boric acid 0.38% showed good flame resistance (UL94).

L132 ANSWER 3 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:769712 Document No. 137:295654 Halogen-free phosphate-free fire-resistant aromatic polycarbonate resin composition. Niide, Yoshikazu (Teijin Chemicals Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002294063 A2 20021009, 23 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-95244 20010329.

AB Title composition comprises (A) 100 parts of an aromatic polycarbonate resin (e.g., Panlite L 1225WP), (B) 0.001-1 part of metal salts such as alkali metal salts or alkaline earth salts (e.g., Megafac F 114P), (C) 0.05-5 parts of alkoxysilane compound (e.g. γ -glycidoxypropyltrimethoxysilane), and (D) 0.01-1 part of fibril-form fluoropolymer (Polyflon MPA FA 500).

L132 ANSWER 4 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:674148 Document No. 137:353768 Impact resistance of fibrous **glass** reinforced plastics using polycarbonate-polydimethylsiloxane block copolymer. Okamoto, Masaya (Polymer Research Laboratory, Idemitsu Petrochemical Co., Ltd., Chiba, 299-0193, Japan). Journal of Applied Polymer Science, 86(5), 1123-1127 (English) 2002. CODEN: JAPNAB. ISSN:

0021-8995. Publisher: John Wiley & Sons, Inc..

- AB By using reactive polydimethylsiloxanes that have phenolic hydroxyl groups at the ends of the chain, a polycarbonate-polydimethylsiloxane (PC-PDMS) block co-polymer was prepared, and the properties of fibrous **glass**-reinforced plastics (GF-PC) using this copolymer were examined. The Izod impact value of the PC-PDMS/GF composite increases with an increase in the d.p. of reactive PDMS (n) between 40 and 160. When n is 40, the Izod impact value of the PC-PDMS/GF composite is equal to that of the PC/GF composite. The Izod impact value is independent of the PDMS content of the copolymer when it is between 2 and 4 wt%. The PC-PDMS/GF composite is superior, in the balance between fluidity and impact resistance, to the PC/GF composite. From the results of SEM, adhesion between the polymer and GF of the PC-PDMS/GF composite is superior to that of the PC/GF composite.

L132 ANSWER 5 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:645051 Document No. 137:170716 Gas-separation polycarbonate membranes with good selectivity for carbon dioxide gas. Ogawa, Noriyoshi; Kanekawa, Tatsuya; Adachi, Takahiro (Mitsubishi Gas Chemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002239357 A2 20020827, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-39552 20010216.

- AB The membranes are made from polycarbonates derived from hydroxy compds. comprising 9,9-bis(4-hydroxy-3-methylphenyl)fluorene and hydroxyphenyl-terminated **siloxane** compound (A) or its mixture with other bisphenol compound and carbonate ester formers where the fractional ratio of A is at 20-60% and the intrinsic viscosity ($[\eta]$; at 20° and 0.5 g/dL in CH₂Cl₂) of the resulting polycarbonates is at 0.2-2.0 dL/g. Thus, dissolving 9,9-bis(4-hydroxy-3-methylphenyl)fluorene 113.4 and hydrosulfide 0.1 in 50 mL of a 8.8% NaOH aqueous solution, adding 500 mL CH₂Cl₂, mixing at 15°, adding benzyltriethylammonium chloride 0.1, passing **phosgene** 51 through the solution for 50 min, combining with a mixture of p-tert-butylphenol 0.9, 3-(2'-hydroxyphenyl)propyldimethylsilyl-terminated di-Me di-Ph **siloxane** 113.4 g and 100 mL a 8.8% NaOH aqueous solution, after mixing for 10 min, adding 0.2 mL triethylamine, further mixing for 1 h and working up gave a polycarbonate with $[\eta]$ 0.75 dL/g, which was cast on a **glass** surface and dried to give a membrane with CO gas permeability 17.3 (10-10 cm³ (STP)·cm/s·cm²·cm-Hg) and N gas permeability 0.50 (10-10 cm³ (STP)·cm/s·cm²·cm-Hg) at 0°.

L132 ANSWER 6 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:353540 Document No. 136:370510 Polycarbonate resin compositions. Okamoto, Masaya; Nodera, Akio; Ishikawa, Yasuhiro (Idemitsu Petrochemical Co., Ltd., Japan). PCT Int. Appl. WO 2002036687 A1 20020510, 83 pp. DESIGNATED STATES: W: US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2001-JP9393 20011025. PRIORITY: JP 2000-334123 20001101; JP 2000-349454 20001116; JP 2000-349455 20001116.

- AB Title compns. are (1) colored compns. containing 5-150 parts inorg. fillers and 100 parts aromatic polycarbonates (A) consisting of 10-100% A terminated with OCOOC6H₄R₁ (R₁ = C₁₀-35 alkyl) and 0-90% A terminated with OCOOC6H₅-aR_{2a} (R₂ = C₁-9 alkyl, halogen, C₆-20 aryl; a = 0-5) or (2) compns. consisting of 100 parts C₂₁-35 alkyl-containing phenoxy-terminated polycarbonate-containing polycarbonates (PC), 0.1-10 parts functional silicones, and 0.2-10 parts core/shell-type graft rubbers or (3) compns. consisting of OCOOC6H₅-aR_{2a}-terminated aromatic polycarbonate-polysiloxanes (CS1), PC, and 0.05-1% (based on 100 parts CS1 and PC) film-forming PTFE with average mol. weight of ≥500,000. A kneaded composition of carbon black, **glass** fibers, and p-dodecylphenol-terminated bisphenol A-**phosgene** copolymer (I) showed spiral flow length 58 cm, gloss 73%, and Izod impact strength 6 kJ/m²; vs., 38, 59, and 6, resp. using

p-tert-butylphenol-terminated bisphenol A-**phosgene** copolymer instead of I.

L132 ANSWER 7 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:140335 Document No. 136:341282 Relationship between the composition of polycarbonate copolymers and the refractive index. Okamoto, Masaya (Polymer Research Laboratory, Idemitsu Petrochemical Company, Limited, Chiba, 299-0193, Japan). Journal of Applied Polymer Science, 84(3), 514-521 (English) 2002. CODEN: JAPNAB. ISSN: 0021-8995. Publisher: John Wiley & Sons, Inc..

AB With a polycarbonate (PC)-poly(Me methacrylate) (PMMA) graft copolymer and a PC-poly(di-Me **siloxane**) (PDMS) block copolymer, the relationship between the composition of PC copolymers and the refractive index (nD) was investigated. According to the results, with a PMMA content of 38 wt %, the nD value of the PC-PMMA graft copolymer was nearly the same as that of elec. (E) **glass** (nD = 1.545), and with a PMMA content of 6 wt %, it was nearly the same as that of elec. corrosion resistance (ECR) **glass** (nD = 1.579). However, with a PDMS content of 19 wt %, the nD value of the PC-PDMS block copolymer was nearly the same as that of E **glass**, and with a PDMS content of 2 wt %, it was nearly the same as that of ECR **glass**. The combination of the PC-PDMS block copolymer and the **glass** fibers (GFs) of ECR **glass** led to haze values of 8 and 16% with GF contents of 10 and 20%, resp.

L132 ANSWER 8 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2001:730883 Document No. 135:257991 Aromatic polycarbonate compositions containing phosphonium salts, process for producing the same, and molded articles thereof. Funakoshi, Wataru; Kageyama, Yuichi; Kaneko, Hiroaki; Sasaki, Katsushi; Miyoshi, Takanori (Teijin Limited, Japan). PCT Int. Appl. WO 2001072901 A1 20011004, 66 pp. DESIGNATED STATES: W: CN, JP, KR, SG, US; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR. (Japanese). CODEN: PIXXD2. APPLICATION: WO 2001-JP2777 20010330. PRIORITY: JP 2000-93999 20000330; JP 2000-109386 20000411; JP 2000-271394 20000907.

AB The present invention relates to an aromatic polycarbonate composition which contains at least one phosphonium salt selected from the group consisting of phosphonium phosphate, phosphonium phosphonate, phosphonium polyphosphates, phosphonium phosphite, phosphonium phosphonite, and phosphonium borate and has a viscosity-average mol. weight of 10,000 to 100,000 and a melt viscosity stability of 0.5 or less. It is excellent in transparency, heat resistance, and hue stability and is useful as a substrate for an optical recording material.

L132 ANSWER 9 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2001:228961 Document No. 134:253422 Thermoplastic articles having a metallic flake appearance. Rosendale, David; Skabardonis, John G. (General Electric Company, USA). PCT Int. Appl. WO 2001021699 A1 20010329, 20 pp. DESIGNATED STATES: W: JP; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US25792 20000920. PRIORITY: US 1999-401233 19990923.

AB Title transparent articles have interspersed small particles with a metallic glint. This appearance is achieved by dispersing metal oxide-coated **glass** platelets within a thermoplastic matrix.

L132 ANSWER 10 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

2000:715378 Document No. 133:282748 Transparent polycarbonate-polysiloxane laminates with good impact and weather resistance for automobile and building windows. Hikosaka, Takaaki; Sakamoto, Shuji (Idemitsu Kosan Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2000280414 A2 20001010, 18 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-86881 19990329.

AB The laminates are composed of polycarbonate-polysiloxane-based polymer middle layers having Si-C bonding in the main chain and inorg.

glass and/or polycarbonate layers. Thus, a copolymer of COC12, 2,2-bis(4-hydroxyphenyl)propane (I), and HO-1,2-C6H4-(CH2)3(SiMe2O)23SiMe2(CH2)3-1,2-C6H4OH was sandwiched between a **glass** sheet and a I-based polycarbonate sheet and hot-pressed to give a laminate with yellowing index 5 after staying at 50° and relative humidity 80% under UV radiation for 3 mo.

L132 ANSWER 11 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1999:790940 Document No. 132:37044 Manufacture of alkoxysilyl-containing polymer coatings with discoloration prevention for optical materials. Kobayashi, Hideki; Masatomi, Akira (Dow Corning Toray Silicone Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 11343457 A2 19991214 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-229315 19980730. PRIORITY: JP 1998-102020 19980330.

AB Title coatings are prepared by (a) reaction of polycarbonates and/or polyarylates containing ≥ 2 unsatd. side and/or terminal groups and having a number-average mol. weight (Mn) of 500-10,000 with alkoxysilanes HSi(OR')aR3-a [R = (substituted) C1-10 hydrocarbyl; R' = (substituted) C1-8 hydrocarbyl; a = 1-3] and/or their partially hydrolyzates in organic solvents containing hydrosilylation metal catalysts, (b) mixing with (**silane**-treated) absorbents selected from activated carbon, SiO2, SiO2 gel, and **glass** beads, and (c) separating the adsorbents to form polymer solns. containing ≤ 1 ppm the metal catalysts. A bisphenol A-2,2'-diallylbisphenol A-**phosgene** copolymer (with Mn of 104) was reacted with MeSiH(OMe)2 in chlorobenzene containing a Pt complex catalyst, mixed with a chlorobenzene solution containing γ -(2-aminoethyl)aminopropyltrimethoxysilane-treated SiO2 gel, and filtered to give a solution containing 0.5-ppm Pt, which was spread on a **glass** plate and heated at 120° for 10 min to form a nonyellowing transparent film with pencil hardness H and water-contact angle of 87°.

L132 ANSWER 12 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1999:414325 Document No. 131:215104 Blends of polycarbonate and polysulphone-polydimethyl-**siloxane** block copolymers: analysis of compatibility and impact strength. Pesetskii, S. S.; Jurkowski, B.; Storozcuk, I. P.; Koval, V. N. (V. Bely Metal-Polymer Research Institute, National Academy of Sciences, Gomel, 246 652, Belarus). Journal of Applied Polymer Science, 73(10), 1823-1834 (English) 1999. CODEN: JAPNAB. ISSN: 0021-8995. Publisher: John Wiley & Sons, Inc..

AB The possibility of modifying Diflon bisphenol A polycarbonates with dian (bisphenol A) polysulfone-polydimethyl **siloxane** block copolymers having a multiblock structure and triblocks with end polydimethyl **siloxane** or a polysulfone block structure was shown. In triblock copolymers the polydimethyl **siloxane** blocks have a constant mol. weight equal to 2500, while in polyblocks it was assumed to be 2500 and 10,000. The mol. weight of polysulfone blocks varied between 700 and 9000 in triblocks or between 500 and 4500 in polyblocks. Block copolymers of both multi- and triblock structure with polydimethyl **siloxane** end blocks of concentration 45-68 weight % are created with PC microheterogeneous blends. These blends, in a wide temperature interval (from cryogenic to the **glass** transition temperature of PC), have high impact strength when multiple crazes are created independently on testing temperature

L132 ANSWER 13 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1998:79493 Document No. 128:155592 Thermoplastic-covered metal products with good heat, chemical and water resistance and good mechanical strength. Kitakawa, Takao; Okano, Yoshihiro (Nippon Kokan Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10028930 A2 19980203 Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1996-185049 19960715.

AB The products comprise metal products (e.g., chromate-treated steel pipe) and surface layers of polyether ether ketones (e.g., PEEK),

polythiophenylenes and/or polyethersulfones containing 10-50% inorg. fillers (aminosilane-treated glass powders).

L132 ANSWER 14 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1997:111229 Document No. 126:118322 Preparation of supported catalyst composition without addition of active transition metal for polymerization of olefins. Carney, Michael John; Ward, David George (W.R. Grace & Co.-Conn., USA). PCT Int. Appl. WO 9640804 A1 19961219, 38 pp.

DESIGNATED STATES: W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, NL, PT, SE. (English). CODEN: PIXXD2.

APPLICATION: WO 1996-US6612 19960507. PRIORITY: US 1995-476186 19950607.

AB The supported catalyst is prepared by treating an inorg. oxide support containing a uniformly distributed Group 3-10 transition metal with a metal alkylating reagent then treating the reaction product with a halogenating reagent. The catalyst is used in conjunction with an activating co-catalyst for the polymerization of olefins to polymers having a wide range of

mol. wts. Thus, calcined silica-titania cogel in pentane was treated with a 34 mmol Bu₂Mg in heptane, with 17.0 mL Me₃SiCl, then with 34 mmol BCl₃ in heptane to give a catalyst (Mg 3.58, Cl 12.77, Ti 2.19, and C 1.91 weight%), which was used with Et₃Al to polymerize ethylene at 0.46 kg polymer/mmol Ti/h.

L132 ANSWER 15 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1996:100769 Document No. 124:203376 Modified polyorganosiloxanes for manufacture of polycarbonate-polysiloxanes with improved flowability and mold release properties and manufacture thereof. Okamoto, Masaya (Idemitsu Petrochemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 07292113 A2 19951107 Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-90923 19940428.

AB The title **siloxanes** HOR₅A(SiR₁R₂O)_nSiR₃R₄AR₆OCDR₇ (R₁-4 = C₁-8 alkyl, C₆-20 aryl; n = 1-500; R₅, R₆ = bivalent organic residue containing aliphatic

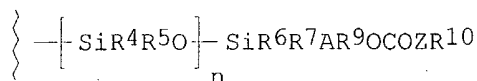
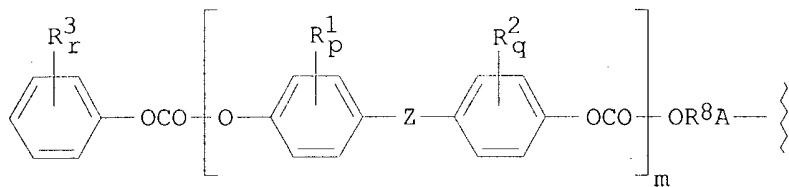
and/or aromatic groups; A, D = single bond, O; R₇ = C₁-20 alkyl, C₇-20 arylalkyl, C₆H₅-kR₃k; R₈ = halo, C₁-8 alkyl, C₆-20 aryl, C₇-20 arylalkyl; k = 0-5) are prepared by treating 1 mol HOR₅A(SiR₁R₂O)_nSiR₃R₄AR₆OH with 0.1-2 mol XCDR₇ (X = halo). Thus, 1483 g octamethylcyclotetrasiloxane was treated with 18.1 g 1,1,3,3-tetramethyldisiloxane at ambient temperature

for 17 h in the presence of 35 g 86% H₂SO₄, neutralized with NaHCO₃, and treated with 60 g 2-allylphenol at 90-115° for 3 h to give a phenolic OH-terminated poly(di-Me **siloxane**), which was treated with 1.27 g Ph chloroformate at room temperature for 30 min to give a modified **siloxane** (I). Bisphenol A (60 kg) was copolymd. with **phosgene** and I to give a block copolymer (II) with viscosity-average mol. weight 15,100, and a blend comprising 70% II and 30% **glass** fibers exhibited flow rate (JIS K-7210) 18 x 10⁻² mL/s and mold release pressure 13 kg/cm².

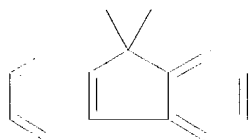
L132 ANSWER 16 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:999806 Document No. 124:88238 Polycarbonates and their preparation and compositions. Okamoto, Masaya (Idemitsu Petrochemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 07258402 A2 19951009 Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-54062 19940324.

GI



I



II

AB Title polymers with good mold-releasability, melt flowability, and rigidity have viscosity-average mol. weight 10,000-50,000 and contain copolymers of polycarbonates with 0.1-20% polyorganosiloxanes I [R¹, R² = halo, C₁-8 alkyl, C₆-20 aryl; Z = direct bond, C₁-20 alkylene or alkylidene, C₅-20 cycloalkylene or cycloalkylidene, O, S, SO₂, CO, p-CMe₂C₆H₄CMe₂, II; R³ = halo, C₁-20 alkyl, C₆-20 aryl, C₇-20 arylalkyl; R⁴-7 = C₁-8 alkyl, C₆-20 aryl; R⁸, R⁹ = aliphatic and/or aromatic divalent organic groups; A, Z = direct bond, O; R¹⁰ = C₁-8 alkyl, C₆-20 (halo-substituted) aryl, C₇-20 arylalkyl; p, q = 0-4; m = 1-150; n = 1-500; r = 0-5]. The polymers are prepared by treating 100 parts polycarbonate oligomers with 0.12-35 parts HOR₈A(SiR⁴R⁵O)_nSiR⁶R⁷AR⁹OCOZR¹⁰ (III) in the presence of dihydric phenols and ≥5 + M (M = mol amount of III) monohydric phenols. Thus, octamethylcyclotetrasiloxane, 1,1,3,3-tetramethyldisiloxane, and H₂SO₄ were treated and then neutralized to obtain an oil product, which was treated with 2-allylphenol and PtCl₂-alcoholate complex to give a phenolic OH-terminated polyorganosiloxane (dimethylsilanoxy repeating units 150). It (0.0081 mol, 91 g) was treated with 0.0081 mol phenylchloroformate and 0.009 mol Et₃N, and then with 10 L of polycarbonate oligomer [prepared from bisphenol A and COCl₂, d.p. 2-4, concentration 317 g/L] and 56 g NaOH, and further with a mixture of bisphenol A 650, NaOH 378, and p-tert-butylphenol 119 g (0.793 mol) to give a copolymer having viscosity-average mol. weight 15,100 and containing 2% polyorganosiloxane. It (70 parts) was melt kneaded and pelletized with 30 parts MA 409C (glass fiber) to give a composition showing melt flowability 18 + 10⁻² mL/s. The composition was injection molded with mold releasing force 13 kg/cm² to give a test piece showing breaking strength 1300 kg/cm².

L132 ANSWER 17 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN
1995:967232 Document No. 123:342866 Manufacture of coextruded, stretched, opaque multilayer polyolefin film containing amorphous polymer particles. Pfeiffer, Herbert; Murschall, Ursula; Schloegl, Gunter; Osan, Frank; Dries, Thomas (Hoechst A.-G., Germany). Ger. Offen. DE 4410559 A1 19950928, 10 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1994-4410559 19940326.

AB A title film comprises ≥1 layer containing particles of an amorphous polymer incompatible with the polyolefin matrix. The film is produced by

extrusion at a temperature higher than the **glass** temperature of the amorphous polymer the particles of which form opacifying vacuoles during film drawing. For example, an opaque 3-layer film comprised a base layer obtained from a blend containing isotactic polypropylene (Eltex PHP 405) 94.85, aromatic polycarbonate (Vicat softening temperature 160°; Apec HT) 5.0, and N,N-bisethoxyalkylamine 0.15%, and outer layers made of a blend containing statistical ethylene-propylene copolymer 98.77, SiO₂ antiblocking agent (particle size 2 µm) 0.33, and poly(di-Me **siloxane**) (viscosity 30,000 mm²/s) 0.90%.

L132 ANSWER 18 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:856227 Document No. 123:230305 Polycarbonate-**siloxane** block copolymer compositions. Okamoto, Masaya (Idemitsu Petrochemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 07207140 A2 19950808 Heisei, 16 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-4983 19940121.

AB The title comps., with good mold releasing, impact resistance, fluidity, and toughness, comprise (a) A-B di-block copolymers 1-94, (b) A-C-A tri-block copolymers 1-94, and (c) inorg. fillers (e.g., MA-409C, **glass** fibers; TA-C6-CS, carbon fibers) 5-60%, (A = polycarbonate block, e.g., bisphenol A-**phosgene** copolymer; B = 1-end-capped **siloxane** block, e.g., 1-end phenol-terminated di-Me **siloxane**; C = both-end-capped **siloxane** block, e.g., both-end phenol-terminated di-Me **siloxane**).

L132 ANSWER 19 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:518648 Document No. 122:241458 Evaluation of **glass** fibers in reinforced aromatic polycarbonate-ABS molding blends. Gemmell, Linda Mcadam; Tennant, Otho Wade; Gallucci, Robert Russell (General Electric Co., USA). Eur. Pat. Appl. EP 624621 A2 19941117, 19 pp. DESIGNATED STATES: R: DE, ES, FR, GB, IT, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1994-303267 19940506. PRIORITY: US 1993-60896 19930512.

AB A thermoplastic resin composition with improved impact strength comprises an aromatic polycarbonate resin, rubber-modified vinyl aromatic-vinyl cyanide graft

copolymer, and **glass** fibers which have been treated with polyolefin wax and, optionally, a functionalized **silane**. The nature of the coating on the **glass** fibers provides the composition with improved impact strength over binding **glass**. For example, a blend containing bisphenol A-**phosgene**-trimellitic anhydride copolymer blend 64, acrylonitrile-styrene copolymer 20, ABS graft copolymer 16, and **glass** fibers coated with polyethylene wax and γ-aminopropyltriethoxysilane (I) coupling agent 11.2 parts had notched Izod impact strength 4.1 ft-lb/in (73°F) and 1.8 ft-lb/in (-20°F), vs. 2.0 and 1.4 for a similar blend reinforced with **glass** fiber coated with styrene-Et acrylate binder and I.

L132 ANSWER 20 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:516473 Document No. 123:200663 **Glass** fiber-reinforced block polycarbonate-**siloxane** compositions. Chiba, Jiro; Umeda, Takashi; Okamoto, Masaya (Idemitsu Petrochemical Co., Japan). Jpn. Kokai Tokkyo Koho JP 07026149 A2 19950127 Heisei, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1994-74860 19940413. PRIORITY: JP 1993-110163 19930512.

AB The title comps. with heat and impact resistance comprise 5-95% polycarbonate-**siloxanes**, 0-90% polycarbonates, and 5-60% **glass** fibers sized with an epoxy resin or an epoxy resin and a polyurethane. A mixture of 80% bisphenol A-**phosgene** -octamethylcyclotetrasiloxane block copolymer (3.5% **siloxane**; viscosity-average mol. weight 20,000) and 20% **glass** fibers (sized with bisphenol A epoxy resin and treated with an amino **silane**) gave injection moldings showing Izod impact strength 26.7 kJ/m², flexural strength 161.7 MPa, tensile strength 98.4 MPa, no delamination of

glass fibers, and good resistance to discoloration during processing at 320°.

L132 ANSWER 21 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1995:229463 Document No. 123:10897 Fiber-reinforced, fireproof polyester carbonate resin molding compositions of improved impact-resistance. Campbell, Richard W. (General Electric Co., USA). U.S. US 5360861 A 19941101, 11 pp. (English). CODEN: USXXAM. APPLICATION: US 1993-69908 19930528.

AB Particular polyester-carbonate resins blended with a fibrous reinforcing agent, a conventional impact-modifier and, optionally, a flame-retarding agent are useful for molding articles, e.g., structural panels exhibiting acceptable elastic modulus and high impact strength (with other desired properties), without addition of alkyl (or Ph) H **siloxane** ingredients known in the previous art. For example, specimens injection-molded from a composition containing polyester-carbonate (Lexan SP)

79.0, chopped **glass** fibers (OCF 415BB) 9.0, polysiloxane-polycarbonate block copolymer (LR 3320) (I) (impact modifier) 6.0, and an oligomeric 50:50 tetrabromobisphenol A/bisphenol A copolycarbonate (TB-50) (fire retardant) 6.0 parts had Kasha index 4020, notched Izod impact strength 187 J/m, Dynatup impact 29 J, and UL-94 rating V0, vs. 6190, 107, 28, and V0 for a similar blend containing no I.

L132 ANSWER 22 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1994:559036 Document No. 121:159036 Card holders for printers and polycarbonate composites for making them. Okamoto, Masaya; Chiba, Jiro (Idemitsu Petrochemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 05294029 A2 19931109 Heisei, 18 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-127930 19920422.

AB The transparent card (or paper) holders are made from heat-resistant 40-95:60-5 composites of a polycarbonate and **glass** which has refractive index similar to that of the polycarbonate.

L132 ANSWER 23 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

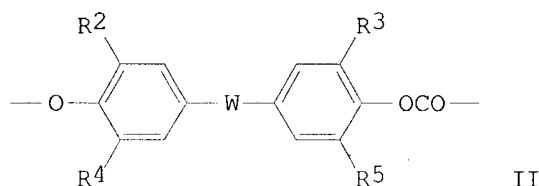
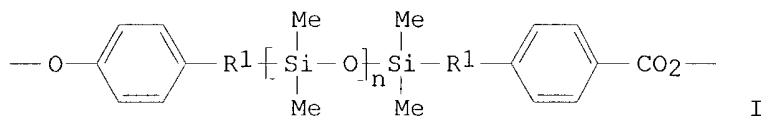
1994:410934 Document No. 121:10934 Flame- and impact-resistant and rigid polycarbonate compositions with good releasability. Okamoto, Masaya; Chiba, Jiro (Idemitsu Petrochemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 05255595 A2 19931005 Heisei, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-57956 19920316.

AB Title compns. contain (a) polycarbonate-**siloxane** (A) copolymers 5-95, (b) polycarbonates 0-90, and (c) TiO₂ (0.5-10%)-containing **glass** 5-60% at A/(a + b) = (0.5-40)/100. Thus, 70 parts bisphenol A-COC12 oligomer (d.p. 3-4)-polydimethylsiloxane copolymer was mixed with 30 parts ECR **Glass** [TiO₂ (2.2%)-containing **glass**], pelletized, and injection-molded at 300° to show Izod impact strength 40 kg-cm/cm (JIS K 7110), flexural modulus 84,500 kg/cm² (JIS K 7103), and UL-94 flame retardance V-2.

L132 ANSWER 24 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1994:300222 Document No. 120:300222 Aromatic polycarbonate compositions. Tokuda, Toshimasa; Oda, Takashi (Teijin Chemicals Ltd, Japan). Jpn. Kokai Tokkyo Koho JP 05311079 A2 19931122 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-114813 19920507.

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AB The title compns. with good color and high impact strength contain (A) 0.001-0.1 part \geq 1 stabilizers selected from trialkyl phosphates, phenylphosphonate esters, and phenylphosphinate esters, (B) 5-120 parts **glass** fibers, and 100 parts mixts. of (C) 0.3-100% polymers with 0.275-0.952 sp. viscosity (η ; 0.7 g in 100 mL CH₂Cl₂) comprising 20-70 mol% aromatic **siloxane**-polycarbonate repeating units I and bisphenol-polycarbonate units II and (D) 0-99.7% aromatic polycarbonates [R1 = CH₂CH₂, CH(Me); n = 1-300; W = direct bond, (cyclo)alkylene, (cyclo)alkylidene, benzene-substituted alkylidene; R2-5 = H, halo, Cl-6 alkyl, cycloalkyl, Ph]. Thus, bisphenol A 94.2, polysiloxane-bisphenol 114.8, and COCl₂ 55.5 parts were reacted to obtain copolysiloxane carbonate (η 0.671), 0.5 parts of which was melt kneaded and pelletized with Panlite L-1250 WP polycarbonate 79.5, **glass** fiber chopped strands 20, and tetrakis(2,4-di-tert-butylphenyl)-4,4'-biphenylene diphosphonite 0.03 part and injection molded to give test pieces showing b value 6.5 and impact strength (ASTM D 256) 13.5 and 12.8 kg-cm/cm for 3.2-mm and 6.4-mm thickness, resp.

L132 ANSWER 25 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1994:272700 Document No. 120:272700 **Glass**-reinforced polycarbonate moldings with good transparency and their manufacture. Chiba, Jiro; Umeda, Takashi; Hashimoto, Kazuto; Okamoto, Masaya (Idemitsu Petrochemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 05310956 A2 19931122 Heisei, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-113305 19920506.

AB The title moldings are manufactured by applying resin films or sheets inside of molds and molding 30-99% polycarbonates and 1-70% **glass** with difference of refractive index for the polycarbonates \leq 0.01. Thus, 90% Taflon A 2200 (polycarbonate) and 10% **glass** fiber were mixed, melt kneaded, injection molded using a Panlite-coated mold to give a test piece with haze 15.3%.

L132 ANSWER 26 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1994:219623 Document No. 120:219623 Impact-resistant and rigid polycarbonate compositions. Okamoto, Masaya; Umeda, Takashi (Idemitsu Petrochemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 05311075 A2 19931122 Heisei, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-120452 19920513.

AB Title compns. giving moldings with good surface appearance, useful as molding materials in elec., electronic, and automobile products, contain (a) polycarbonate-polyorganosiloxane (A) copolymers 10-90, (b) polycarbonates 0-80, and (c) **glass** fibers [average diameter (B) \leq 3 μ m] 10-60% at A/(a + b) = (0.5-40)/100. Thus, bisphenol A (I)-**phosgene** oligomer (d.p. 3-4) was mixed with phenol-terminated polydimethylsiloxane (II; number of dimethylsilanoxy unit 150, prepared from octamethylcyclotetrasiloxane, 1,1,3,3-tetramethyldisiloxane, and 2-allylphenol) and stirred with I and p-(tert-butyl)phenol at room temperature in a mixture of H₂O and CH₂Cl₂ in the

presence of Et₃N and NaOH to prepare a chipped polycarbonate-II copolymer, 70 parts of which was mixed with 30 parts E-FMW-800 (**glass** fiber; B 0.8 μm), pelletized, and injection molded to give a test piece showing Izod impact strength 34 kg-cm/cm (JIS K 7110), flexural modulus 109,600 kg/cm² (JIS K 7103), tensile break strength 1700 kg/cm² (JIS K 7113), and smooth surface.

L132 ANSWER 27 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

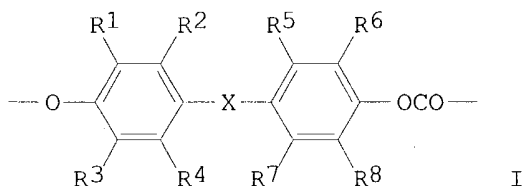
1994:108712 Document No. 120:108712 Polycarbonate compositions for transparent and fire-retarding moldings. Okamoto, Masaya; Chiba, Jiro (Idemitsu Petrochemical Co., Ltd., Japan). PCT Int. Appl. WO 9310185 A1 19930527, 61 pp. DESIGNATED STATES: W: CA, KR, US; RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE. (Japanese). CODEN: PIXXD2. APPLICATION: WO 1992-JP1485 19921113. PRIORITY: JP 1991-300345 19911115; JP 1991-300347 19911115; JP 1991-303153 19911119; JP 1991-346352 19911227.

AB The title compns. comprise (a) polycarbonate copolymers 10-95, (b) **glass** beads or fibers 5-70, and (c) polycarbonates, providing that the difference of n of the **glass** and (a + c) being <0.01. Thus, a transparent sheet was prepared by copolymerg. 2-allylphenol-treated octamethylcyclotetrasiloxane-1,1,3,3-tetramethyldisiloxane copolymer with bisphenol A-**phosgene** copolymer, blending with **glass** fibers and Touflon FN2200 (polycarbonate), and press molding.

L132 ANSWER 28 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1993:627723 Document No. 119:227723 Transparent polycarbonate-siloxane molded products. Ogawa, Noryoshi; Kanayama, Satoshi (Mitsubishi Gas Chemical Co., Japan). Jpn. Kokai Tokkyo Koho JP 05202181 A2 19930810 Heisei, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-11160 19920124.

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AB The title products with good surface smoothness and abrasion resistance are composed of polycarbonate-siloxanes containing polycarbonate units I [R1-8 = H, halo, (un)substituted alkyl or aryl; X = CR11R12, S, SO₂, CO, O, (CH₂)_a; R11-12 = H, halo, (un)substituted alkyl or aryl; R11R12 may be bonded to form a carbocycle or a heterocycle; a ≥ 1] and are heated at temperature below **glass** transition temperature (T_g) to adjust unit II concentration on the surface layer (depth <50 Å) to ≥2 times that in the core layer (depth ≥50 Å). Thus, a mixture of 91.2 kg bisphenol A, 5.95 kg HOC₆H₄(CH₂)₃(SiMe₂O)₄OSiMe₂(CH₂)₃CO₆H₄ 4OH, and 100 g hydrosulfite in aqueous NaOH-CH₂Cl₂ mixture was bubbled with

53.0

kg COCl₂ and stirred 1 h to give a polymer with T_g 140° and viscosity average mol. weight 3.0 × 10⁴, which was press molded at 250° and 100 kg/cm² and heated at 130° for 2 h to give a molding with **siloxane** concentration 15% in the surface layer, pencil hardness 2H, Taber abrasion loss 12 mg.

L132 ANSWER 29 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1993:561750 Document No. 119:161750 Polycarbonate compositions containing zinc oxide whiskers with tetrapod structure. Okamoto, Masaya; Umeda, Takashi (Idemitsu Petrochemical Co, Japan). Jpn. Kokai Tokkyo Koho JP 05156170 A2 19930622 Heisei, 9 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1991-327595 19911211.

AB The title compns., showing good impact resistance and dimensional stability, comprise polycarbonate-**siloxanes** 5-95, polycarbonates 0-90, and ZnO whiskers 5-40%. Polymerizing 1483 g octamethylcyclotetrasiloxane with 18.1 g (HSiMe₂)₂O, treatment with 60 g 2-allylphenol to give a hydroxyphenyl-terminated **siloxane**, and treatment with bisphenol A-phosgene oligomer gave a polycarbonate-**siloxane** (4% **siloxane**) which was mixed (70%) with 30% Panatetra (ZnO whiskers), pelletized, and injection-molded to give moldings showing Izod impact strength 22 kg-cm/cm and shrinkage 0.38% in the machine direction and 0.42% in the transverse direction.

L132 ANSWER 30 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1993:214321 Document No. 118:214321 Flame retardant aromatic block polycarbonate-**siloxanes** and aromatic polycarbonate blends. Davis, Charles Gary (General Electric Co., USA). Eur. Pat. Appl. EP 522753 A2 19930113, 6 pp. DESIGNATED STATES: R: DE, FR, GB, IT, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1992-305887 19920625. PRIORITY: US 1991-724020 19910701.

AB The title polymers (0.1-0.9% diorganosiloxy units) show low smoke and heat release (ASTM E906-83) when burned while retaining good impact and heat resistance. Bisphenol A polycarbonate-di-Me **siloxane** block copolymer (0.47% **siloxane**; glass temperature 150°; number-average mol. weight 18,900) had heat release 130.3 kW/m² and smoke release 216.8 smoke/min-m², vs. 223.6 and 477.8, resp., for polycarbonate only.

L132 ANSWER 31 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1993:103745 Document No. 118:103745 Thermoplastic polymer compositions with high mechanical strength. Takada, Toshiaki; Otaki, Hideo; Shioda, Kohei; Yagi, Jun (Mitsubishi Gas Chemical Co., Inc., Japan; Matsushita Electric Industrial Co., Ltd.). Jpn. Kokai Tokkyo Koho JP 04202475 A2 19920723 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-330348 19901130.

AB The title compns. comprise thermoplastic polymers and 1-60% Zn oxide whiskers treated with polyorganosiloxanes. Thus, 70 parts Iupilon S 2000 (bisphenol A polycarbonate) and 30 parts Me hydrogen **siloxane**-treated ZnO were pelletized and injection molded to give test pieces with bonding strength 1020 kg/cm² and Izod impact strength 24 kg.cm/cm, vs. 950 and 14, resp., using untreated ZnO.

L132 ANSWER 32 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1993:40178 Document No. 118:40178 Thermoplastic polymer compositions with high mechanical strength. Takada, Toshiaki; Otaki, Hideo (Mitsubishi Gas Chemical Co., Inc., Japan). Jpn. Kokai Tokkyo Koho JP 04202476 A2 19920723 Heisei, 5 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-330361 19901130.

AB The title compns. comprise thermoplastic polymers and 0.001-30% Ti oxide treated with polyorganosiloxanes. Thus, 90 parts Iupilon S-2000 (bisphenol A polycarbonate) and 10 parts Me and H terminated polysiloxane-treated TiO₂ were pelletized and injection molded to give test pieces with bending strength 1020 kg/cm² and Izod impact strength 85 kg.cm/cm, vs. 950 and 10, resp., using untreated TiO₂.

L132 ANSWER 33 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

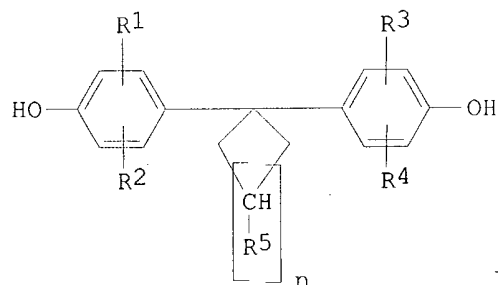
1992:107621 Document No. 116:107621 **Glass** fiber-reinforced polycarbonate resin compositions. Umeda, Takashi; Okamoto, Masaya

(Idemitsu Petrochemical Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 03243656 A2 19911030 Heisei, 9 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1990-38282 19900221.

AB The title compns. comprise 100 parts blends of 5-100% polycarbonate-polyorganosiloxane copolymers and 95-0% polycarbonate resins (polyorganosiloxane content 0.1-40%), 5-120 parts **glass** fibers, and 5-120 parts plate and/or particulate fillers. Thus, octamethylcyclotetrasiloxane was polymerized with 1,1,3,3-tetramethyldisiloxane, then treated with 2-allylphenol to give a phenol-terminated di-Me polysiloxane, which was then treated with bisphenol A-**phosgene** oligomer to give a polycarbonate-polyorganosiloxane copolymer with viscosity-average mol. weight 20,000 containing 2% di-Me **siloxane**, 100 parts of which was mixed with 50 parts **glass** fibers (length 3 mm, diameter 13 μ m) and 50 parts **glass** beads (average diameter 35 μ m), melt kneaded at cylinder temperature 280° to give pellets, which were dried at 120° for 10 h, then injection molded at cylinder temperature 300° and mold temperature 80° to give test pieces with Izod impact strength 15.0 kg-cm/cm, flexural modulus 101,000 kg/cm², and molding shrinkage 0.12% in mech. direction, 0.47% in the transverse direction.

L132 ANSWER 34 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN
1991:450579 Document No. 115:50579 Dihydroxydiphenylcycloalkane-based polysiloxane-polycarbonate block copolymers. Horlacher, Peter; Serini, Volker; Freitag, Dieter; Grigo, Ulrich; Idel, Karsten Josef; Westeppe, Uwe (Bayer A.-G., Germany). Eur. Pat. Appl. EP 413205 A2 19910220, 7 pp.
DESIGNATED STATES: R: DE, FR, GB, IT. (German). CODEN: EPXXDW.
APPLICATION: EP 1990-114809 19900802. PRIORITY: DE 1989-3926850 19890815.

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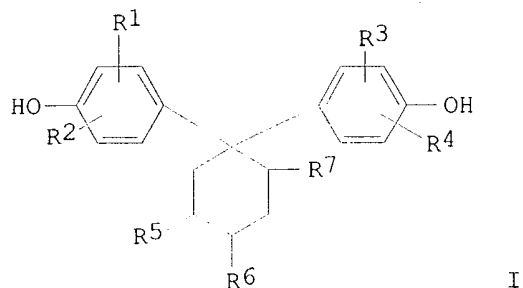


AB The title polymers, which have number-average mol. weight 10,000-300,000, contain polycarbonate blocks derived from diphenols I (R1-R4 = H, halogen, C1-8 alkyl, C5-6 cycloalkyl, C6-10 aryl, C7-12 aralkyl; R5 = H, C1-12 alkyl; n = 2, 3; such that ≥ 1 R5 \neq H) 75-99.0% and a content of polydiorganosiloxane blocks (having d.p. 5-300) 1-25%. These polymers are useful for the manufacture of molded articles and can be subjected to extrusion, etc. Thus, 1,1-bis(4-hydroxyphenyl)-3-methylcyclohexane 26.5, NaOH 6.75, and H₂O 385 g were stirred together with a solution of 1.67 g polydimethylsiloxane (d.p. 71) which had bisphenol A end groups and 0.22 g PhOH in 190 mL CH₂Cl₂. The stirred solution was maintained at pH 12-13 at 21-25° and 15.8 g **phosgene** added, the mixture stirred, 0.14 mL ethylpiperidine added, and the product acidified with H₃PO₄, and water-washed until neutral, and freed of solvent, producing a block polycarbonate-polysiloxane having relative viscosity 1.279 and **glass** transition temperature 211.5°.

L132 ANSWER 35 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1991:248529 Document No. 114:248529 Thermoplastic blends of cyclohexylidenediphenol polycarbonates. Serini, Volker; Freitag, Dieter; Idel, Karsten; Grigo, Ulrich (Bayer A.-G., Germany). Eur. Pat. Appl. EP 387593 A2 19900919, 24 pp. DESIGNATED STATES: R: DE, ES, FR, GB, IT, NL. (German). CODEN: EPXXDW. APPLICATION: EP 1990-103772 19900227. PRIORITY: DE 1989-3908002 19890311; DE 1989-3926613 19890811.

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AB Blends with good processability and mech. properties contain 1-99% polycarbonates from the bisphenols I [R1-4 = H, hydrocarbyl, halogen; R5-7 = H, hydrocarbyl (≥ 1 must be hydrocarbyl)] and thermoplastics [glass temperature (T_g) 40-300°], crystalline thermoplastics (m.p. 60-400°), rubbers, and/or grafted rubbers. A 1:1 blend of 4,4'-(4-tert-butylcyclohexylidene)diphenol polycarbonate [relative viscosity (η_r) 1.313, T_g 221°] with bisphenol A polycarbonate (η_r 1.302) had Vicat B temperature 183°, notched impact strength 12 kJ/m², and good melt flow.

L132 ANSWER 36 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1991:230065 Document No. 114:230065 Aromatic block polycarbonate-polysulfone-siloxanes with high glass temperature. Sybert, Paul Dean (General Electric Co., USA). Eur. Pat. Appl. EP 413170 A2 19910220, 18 pp. DESIGNATED STATES: R: DE, FR, GB, IT, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1990-114042 19900723. PRIORITY: US 1989-394710 19890815.

AB The title polymers have good flexibility and are prepared from bis(3,5-dimethyl-4-hydroxyphenyl) sulfone (I), bisphenols, OH-terminated siloxanes, and carbonate precursors. Thus, 68.00 g I in 400 mL water and 310 mL CH₂Cl₂ was treated with 65.9 g phosgene, treated with a solution of bisphenol A-capped siloxane fluid (DP 30) 76.8, SPA 18.4, and p-cumylphenol 0.393 g in 70 mL water and 267 mL CH₂Cl₂, mixed with 5.5 mL Et₃N, and stirred 15 min at pH 10.0 to give a block copolymer with glass temperature 192°.

L132 ANSWER 37 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1991:103542 Document No. 114:103542 Impact-resistant polycarbonate-siloxane compositions. Okamoto, Masaya (Idemitsu Petrochemical Co., Ltd., Japan). Eur. Pat. Appl. EP 376052 A2 19900704, 10 pp. DESIGNATED STATES: R: BE, CH, DE, FR, GB, IT, LI, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1989-122982 19891213. PRIORITY: JP 1988-326349 19881226.

AB The title compns. comprise 6-90% polycarbonate-siloxane, 10-60% glass fibers, and 0-84% polycarbonate. A block polymer (I) was prepared from 160 g bisphenol A (II)-terminated di-Me siloxane, 10 L COCl₂-II oligomer solution (317 g/L), and 600 g II. A 50:50 mixture of I and aminosilane-treated glass fibers had Izod impact 31 kg-cm/cm, tensile modulus 84,800 kg/cm², and bending strength 2400 kg/cm²,

vs. 19, 85,000, and 24,090, resp., with a polycarbonate instead of I.

L132 ANSWER 38 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1989:633917 Document No. 111:233917 Impact-modified p-cumyl-endcapped polycarbonates. Van de Watering, Ludovicus; De Boer, Jan (General Electric Co., USA). Eur. Pat. Appl. EP 315226 A1 19890510, 8 pp. DESIGNATED STATES: R: DE, FR, GB, IT, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1988-201914 19880906. PRIORITY: NL 1987-2632 19871104.

AB Title polycarbonates, which when compounded with TiO₂ fillers or additives show little reduction in impact strength, are prepared and have relative viscosity ≤ 1.24 . Thus, interfacial polymerization of bisphenol A and **phosgene** in the presence of chain stopper 4-cumylphenol (4.7 mol% based on polymer) gave a capped polycarbonate with relative viscosity 1.23, melt flow index 25 g/10, and notched Izod impact value 620 J/m. Compound of this polycarbonate with 2% TiO₂ had notched Izod impact value 636 J/m, vs. 164 J/m for a compound of phenyl-terminated polycarbonate.

L132 ANSWER 39 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1988:494267 Document No. 109:94267 Polycarbonate compositions exhibiting improved wear resistance. Boutni, Omar M. (General Electric Co., USA). U.S. US 4749738 A 19880607, 7 pp. (English). CODEN: USXXAM. APPLICATION: US 1986-943464 19861219.

AB The title compns. contain aromatic polycarbonates, **glass** fillers, polyolefins, fluorinated polyolefins, and silicone fluids. Thus, a blend of bisphenol A polycarbonate 69.9, **glass** fibers 20, LLDPE 5, PTFE 5, and Me hydrogen silicone fluid 0.1% had wear factor 12 + 1010 in.3-min/lb-ft-h, vs. immediate failure for the polycarbonate alone.

L132 ANSWER 40 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1988:39047 Document No. 108:39047 Molding compositions containing block polycarbonate-**siloxanes** and thermoplastic polyesters. Witman, Mark; Grigo, Ulrich; Nouvertne, Werner; Paul, Winfried (Bayer A.-G., Fed. Rep. Ger.). Ger. Offen. DE 3606475 A1 19870903, 11 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1986-3606475 19860228.

AB The title compns., with good toughness, contain 75-97.5:25-2.5 block polycarbonate-**siloxanes** (I) (relative viscosity of 0.5% CH₂Cl₂ solution ≥ 1.15 at 25°) 10-98, polyesters containing 0.5-21% sulfone groups [intrinsic viscosity (1:1 PhOH-o-C₆H₄Cl₂, 25°) ≥ 0.6 dL/g] 2-90, and rubber-elastic polymers (**glass** temperature $< -20^\circ$) 0-30%. A mixture of 94.9:5.1 I [from OAc-terminated di-Me **siloxane** (d.p. 40), bisphenol A, and COCl₂, relative viscosity 1.295] (II) 54, polyester-polysulfone (from di-Me terephthalate 4.66, 1,4-butanediol 2.89, and 4,4'-sulfonyldiphenyl 0.529 kg, intrinsic viscosity 1.22) 36, and 80:20 butadiene-Me methacrylate graft polymer 10 parts had notched Izod impact strength 866, 719, and (5 + 547) J/m at room temperature, -20°, and -40°, resp.; vs. 873, 685, and 270, resp., with poly(butylene terephthalate) in place of II.

L132 ANSWER 41 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1987:497844 Document No. 107:97844 Cyclic polyether-modified thermoplastic resins. Sakaki, Toru; Ogata, Takayuki; Horimoto, Hikari; Tsubaki, Shigeko (Tokuyama Soda Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 62070452 A2 19870331 Showa, 95 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-210179 19850925.

AB Mixts. of a thermoplastic resin and 0.1-40.0 phr 12-crown-4 derivative containing a group such as R(CH₂)_nOCH₂ (n = 1-4), R(CH₂)_sCO₂CH₂ (s = 0-3), RO(CH₂)_mOCH₂ (m = 2-6), RO(CH₂)_qCO₂CH₂ (q = 1-3), or RCONH(CH₂)_tCO₂CH₂ (t = 1-3) [R = aromatic group such as biphenyl-4-yl, anthryl, phenanthryl, p-phenylazophenyl, anthraquinonyl, pyrenyl, fluorenyl, p-styrylphenyl, bis-, tris-, or tetrakis(trifluoromethyl)phenyl, tri-, tetra-, or pentahalophenyl, or p-(p-alkoxyphenylazo)phenyl] are useful for preparing

electrodes which have good Na⁺ selectivity and sensitivity and are suitable for removing or concentrating Na salts, etc. A mixture of p-(chloromethyl)biphenyl 5, (hydroxymethyl)-12-crown-4 5, and KOH 5 mmol in acetone was refluxed 96 h to give [(biphenyl-4-ylmethoxy)methyl]-12-crown-4 which (20 mg) was mixed with 200 mg PVC, 400 mg o-nitrophenyl octyl ether, and 10 mL THF and cast on **glass** to give a membrane (.apprx.100 μ) having Na selectivity ratio 20.

L132 ANSWER 42 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

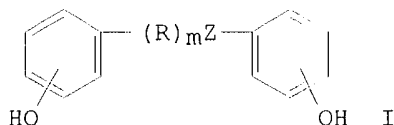
1986:573845 Document No. 105:173845 Thermoplastic molding compositions from block polycarbonate-**siloxanes**. Paul, Winfried; Grigo, Ulrich; Mueller, Peter Rolf; Nouvertne, Werner (Bayer A.-G., Fed. Rep. Ger.). Ger. Offen. DE 3506680 A1 19860828, 45 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1985-3506680 19850226.

AB Tough molding compns., useful in auto bodies, contain block polycarbonate-**siloxanes** (mol. weight 10,000-30,000, **siloxane** content 0.5-10%) 30-98, rubber-elastic polymers (**glass** temperature $<-20^{\circ}$) 1-30, and poly(alkylene terephthalates) 0-50%. Interfacial polymerization of bisphenol A-terminated di-Me **siloxane** (d.p. 84) 190, bisphenol A 3035, 4-tert-octylphenol 164.7, and COCl₂ 2216 parts gave a 94.7:5.3 block polycarbonate **siloxane** (I) with relative viscosity (5 g/L, CH₂Cl₂, 25 $^{\circ}$) 1.200. A blend of I 53.9, 80:20 butadiene-Me methacrylate graft polymer 10, and poly(butylene terephthalate) 36 parts had melt viscosity 159 mPa-s at 260 $^{\circ}$, notched Izod impact strength 788, 570, and 268 at room temperature, -10 $^{\circ}$, and -20 $^{\circ}$, and heat distortion temperature 109 $^{\circ}$.

L132 ANSWER 43 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1986:534821 Document No. 105:134821 Polycarbonates exhibiting improved heat resistance. Hedges, Charles Vernon; Mark, Victor (General Electric Co., USA). Eur. Pat. Appl. EP 164477 A1 19851218, 85 pp. DESIGNATED STATES: R: DE, FR, GB, IT, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1984-401353 19840626. PRIORITY: US 1984-620711 19840614.

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AB Impact-resistant compns. with improved heat resistance and useful for films, sheets, and molded articles contain ≥ 1 linear thermoplastic polymer prepared from a carbonate precursor and ≥ 1 dihydric phenol compound I (R = hydrocarbyl, Z = C₁₀₋₁₆ monocyclic cycloalkylidene; m = 0-number of replaceable atoms on Z) and an impact-modifying compound. Thus, a mixture containing 42.1 g 4,4'-cyclododecylidene bisphenol, 28.5 g bisphenol A, 0.7 mL Et₃N, 0.12 g PhOH, 400 mL MeCl₂, and 300 mL H₂O was mixed with COCl₂ at 1 g/min for 27 min at pH 10.2-11.4 then the solution was worked up to give a polycarbonate (II) having second order **glass** transition temperature 186 $^{\circ}$. A blend containing 100 parts II and 4.5 parts linear low-d. polyethylene was extruded, then injection molded into test pieces having notched Izod impact strength 1.87 ft-lb/in. (0.125-in. notch), 2.44 ft-lb/in. (0.25-in. notch), and DTUL (heat distortion under 164 psi load) 173.6 $^{\circ}$, vs. 1.67, 0.7, and 173.5 without impact modifier.

L132 ANSWER 44 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1985:114308 Document No. 102:114308 Damping modulus studies of poly(dimethylsiloxane)-bisphenol A-polycarbonate block copolymers. Maung, W.; Williams, H. Leverne (Dep. Chem. Eng. Appl. Chem., Univ. Toronto, Toronto, ON, M5S 1A4, Can.). Polymer Engineering and Science, 25(2), 113-17 (English) 1985. CODEN: PYESAZ. ISSN: 0032-3888.

AB A dynamic mech. and differential scanning calorimetry study of random multiblock copolymers of bisphenol A polycarbonate and poly(dimethylsiloxane) indicated that polymers of random short-block length are phase-separated although the minor phase is not clearly observed

when

present in the smallest amts. The separation is altered by thermal history and by the solvent when solvent casting is used to prepare sample films. Pressed films have a less-reinforced structure which is partially restored on annealing. Damping did not vary greatly with frequency and is greatest near the **glass** transition temps. of the 2 components. The expansion of the block copolymers with heat is retarded by the polycarbonate phase until the **glass** transition of that phase is approached.

L132 ANSWER 45 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1983:523653 Document No. 99:123653 High-impact, high-modulus reinforced aromatic carbonate polymeric mixtures. Van Abeelen, Petrus C. A. M.; De Munck, Hans (General Electric Co., USA). U.S. US 4393161 A 19830712, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 1981-281710 19810709.

AB The impact strength of **glass** fiber-reinforced polycarbonate containing acrylonitrile-styrene copolymer (I) [9003-54-7] is improved by addition of minor amts. of a **siloxane** polymer containing substantial amts. of Si-H bonds. Thus, a composition containing bisphenol A-phosgene copolymer [25971-63-5] 60, I 20, MeH **siloxane** 0.5, and unsized **glass** fibers 20 parts was extruded at 265° and injection molded at 300° to give specimens having Izod notched impact strength 100 J/m compared with 35 J/m for samples containing no **siloxane**.

L132 ANSWER 46 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1983:54834 Document No. 98:54834 Inverse gas chromatography studies of polydimethylsiloxane (PDMS) polycarbonate (PC) copolymers and blends. Ward, T. C.; Sheehy, D. P.; McGrath, J. E.; Riffle, J. S. (Dep. Chem., Virginia Polytech. Inst. and State Univ., Blacksburg, VA, 24061, USA). Polymer Preprints (American Chemical Society, Division of Polymer Chemistry), 22(1), 187-9 (English) 1981. CODEN: ACPPAY. ISSN: 0032-3934.

AB The **glass** temperature and m.p. of block di-Me **siloxane** -polycarbonates were only slightly lower than those of the pure homopolymers. The **glass** temperature of polymers containing very short polycarbonate blocks was lower than that of the homopolymer, showing a fair amount of mixing of **siloxane** and polycarbonate microphases. A random copolymer showed only 1 transition, a **glass** transition below that of the homopolycarbonate, indicating poor phase separation. Interaction parameters showed 2 selective and 2 neutral solvents for the homopolymers. In all **siloxane**-polycarbonate systems, the retention volume exceeded the geometric mean of the homopolymers, indicating incompatibility. The retention volume of random copolymers, blends, and block polymers is approx. the same for a given concentration

L132 ANSWER 47 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1983:4923 Document No. 98:4923 Arylene siloxanylene polymers and copolymers. Rosenberg, Harold (United States Dept. of the Air Force, USA). U. S. Pat. Appl. US 343032 A0 19820827, 28 pp. Avail. NTIS Order No. PAT-APPL-6-343 032 (English). CODEN: XAXXAV. APPLICATION: US 1982-343032 19820127.

AB The title polymers, with high mol. weight, are prepared by polymerizing arylene-linked silanediols, preferably containing carbonate groups, with

COC12. Thus, hydrolysis of 122.1 g m-Me2SiHC6H4OSiHMe2 [80783-64-8] in aqueous MeOH gave 89.85 g m-Me2SiHC6H4OH [80772-07-2], which with COCl2 in PhMe-pyridine gave (m-Me2SiHC6H4O)2CO [80772-08-3]. Pd-catalyzed hydrolysis of 84.0 g this ester gave 69.0 g (m-HOSiMe2C6H4O)2CO [74946-62-6], polymerization of which with COCl2 in pyridine at .apprx.0° gave 47% polymer [74946-63-7] with intrinsic viscosity 1.30 dL/g and **glass** temperature 14°.

L132 ANSWER 48 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1982:493480 Document No. 97:93480 High impact, high modulus fiber-reinforced aromatic carbonate polymers. VanAbeelen, Petrus Cornelis A. M. (General Electric Co., USA). Eur. Pat. Appl. EP 53825 A1 19820616, 19 pp. DESIGNATED STATES: R: DE, FR, GB, IT, NL. (English). CODEN: EPXXDW. APPLICATION: EP 1981-110186 19811205. PRIORITY: US 1980-214010 19801208.

AB The impact resistance of fiber-polycarbonate composites is improved with little detriment to elastic modulus by using unsized fibers and a **siloxane** containing Si-H bonds. Thus, a composition containing bisphenol A-**phosgene** copolymer [25971-63-5] 70, unsized **glass** fibers 30, and poly(methylhydrogen)**siloxane** 0.4 parts had notched Izod impact strength 152 J/m and elastic modulus 5100 N/mm2, compared with 53 and 5250, resp., when the **siloxane** was omitted.

L132 ANSWER 49 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1982:200445 Document No. 96:200445 Polydimethyl **siloxane**-polycarbonate block copolymer studies utilizing inverse gas chromatography. Ward, T. C.; Sheehy, D. P.; McGrath, J. E. (Dep. Chem., Virginia Polytech. Inst. and State Univ., Blacksburg, VA, 24061, USA). Polymer Preprints (American Chemical Society, Division of Polymer Chemistry), 21(2), 70-1 (English) 1980. CODEN: ACPPAY. ISSN: 0032-3934.

AB The retention of decane on perfectly alternating title copolymers (prepared by adding bisphenol A and **phosgene** to Me2NH-determined polydimethylsiloxane) below the polycarbonate **glass** temperature was used to determine morphol. changes caused by compositional changes. The changes in accessible surface area of the polycarbonate domains as a function of polycarbonate weight fraction were determined As the polycarbonate became the continuous phase, penetration by decane of the **siloxane** domains was blocked, leaving only surface adsorption of the polycarbonate phase as the retention mechanism. There was a large decrease in the domain surface area as the polycarbonate fraction increased. The calculated values for the radii of the spherulites in the polycarbonate phase were 4-5 times the expected dimensions of the microphase.

L132 ANSWER 50 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1981:620646 Document No. 95:220646 Inverse gas chromatography studies of poly(dimethylsiloxane)-polycarbonate copolymers and blends. Ward, T. C.; Sheehy, D. P.; McGrath, J. E.; Riffle, J. S. (Chem. Dep., Virginia Polytech. Inst. and State Univ., Blacksburg, VA, 24061, USA). Macromolecules, 14(6), 1791-7 (English) 1981. CODEN: MAMOBX. ISSN: 0024-9297.

AB The specific retention vols. of a series of volatile probes on stationary phases consisting of di-Me **siloxane** and bisphenol A polycarbonate (I) [24936-68-3] as well as block copolymers and blends of these substances were evaluated in terms of the Flory-Huggins approximation The polymer-solvent, χ_{12} , and normalized polymer-polymer, χ_{23}' , noncombinatorial free energies of mixing were determined in each case. The χ_{23}' was studied as a function of block length of I in the copolymer, the chemical structure of the probes, and the copolymer or blend composition

In

addition, the morphologies of phase-separated copolymers were analyzed from the specific retention vols. of n-decane [124-18-5], a solvent for the **siloxane** and a nonsolvent for I, at temps. below the I **glass** transition. The data obtained were compared to morphol.

information obtained from differential scanning calorimetry, electron microscopy, and small-angle x-ray scattering. Measured χ_{23}' values reflected in all cases the known incompatibility of **siloxane** and I in the copolymers and blends. Also, useful information on the copolymers' morphol. was obtained by studying the retention behavior of the n-decane probe below the I **glass** transition. The specific retention volume for the microphase-separated copolymers under these conditions indicated whether the **siloxane** phase was continuous or not and, in some cases, the actual surface area of the I domains. Diams. of domains (assuming rod or lamellar geometry) 180-700 Å were calculated from the results.

L132 ANSWER 51 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1981:426153 Document No. 95:26153 Nonbleeding fire resistant resin compositions. (Dainippon Ink and Chemicals, Inc., Japan). Jpn. Kokai Tokkyo Koho JP 56034748 19810407 Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1979-109109 19790829.

AB The resin compns. contain polyesters 100, polycarbonate-modified brominated epoxy resins 3-50, inorg. fireproofing assistants 0.1-20, and reinforcing fillers 0-150 parts. Thus, polybutylene terephthalate [24968-12-5] 100, 1,6-hexanediol diglycidyl ether-tetrabromobisphenol A-tetrabromobisphenol A diglycidyl ether-**phosgene** copolymer (I) [26062-94-2] 30, Sb2O3 10, and chopped strand **glass** fibers treated with an **aminosilane** coupling agent 60 parts were mixed, extruded, pelletized, and injection-molded to prepare test pieces having UL 94 rating V-0, yellowing after 5 h at 180°, and no bleeding after 1 h at 120°, compared with V-0, browning, and bleeding for test pieces containing tetrabromobiphenyl ether in place of I.

L132 ANSWER 52 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1981:408302 Document No. 95:8302 Filled thermoplastic resin compositions. Myers, Donald C.; Wilson, Phillip S. (General Electric Co., USA). U.S. US 4243575 19810106, 11 pp. (English). CODEN: USXXAM. APPLICATION: US 1979-60742 19790725.

AB Polycarbonate resins containing fillers which are compatible with the resin and do not deleteriously affect phys. properties are disclosed. Thus, bisphenol A-**phosgene** copolymer [25971-63-5] containing 10% solid microspheres derived from fly ash had unnotched Izod impact strength >40.0 and notched impact strength 1.69 (0.250 in. thick sample) compared with >40.0 and 1.66, resp., for the control.

L132 ANSWER 53 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1980:641350 Document No. 93:241350 Abrasion resistant silicone coated polycarbonate article. Olson, Daniel Robert; Schroeter, Siegfried Herman (General Electric Co., USA). PCT Int. Appl. WO 8001007 19800515, 36 pp. (English). CODEN: PIXXD2. APPLICATION: WO 1979-US906 19791029.

AB Non-opaque silica-filled organopolysiloxane-coated polycarbonate articles prepared with a thermoplastic acrylic polymer adhesion-promoting primer layer have increased abrasion resistance. Thus, 2,2-bis(4-hydroxyphenyl)propane-**phosgene** copolymer [25971-63-5] test panels were primed with poly(Me methacrylate) [9011-14-7] in 20 parts ethylene glycol diacetate and 80 parts butoxyethanol, coated with a silica-filled **siloxane** derived from MeSi(OMe)3, and air dried. The product had a change in haze level of 5.2% after abrasion testing, did not delaminate, and could withstand the impact of a Gardner Falling Dart (320 in.-lb).

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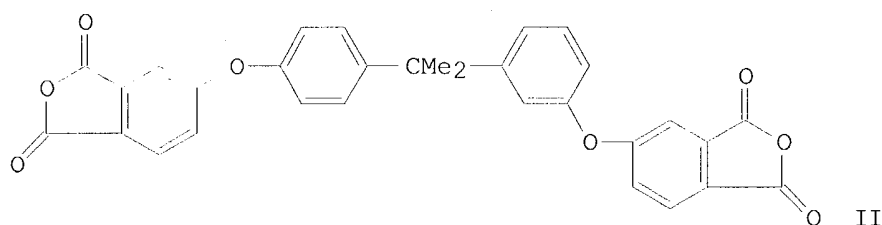
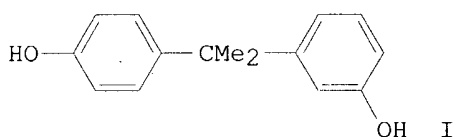
1980:621557 Document No. 93:221557 Filled polycarbonate compositions. Macke, Gerald F. (General Electric Co., USA). U.S. US 4224215 19800923, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 1979-31993 19790420.

AB The impact properties of parts molded from **glass** fiber-filled

polycarbonates are improved by mixing the filled polycarbonate with 1.5-4% organopolysiloxane-polycarbonate block copolymer. Thus, bisphenol A-**phosgene** copolymer [25971-63-5] containing 5% **siloxane**-polycarbonate block copolymer and 30% **glass** fibers was extruded and pellitized and the pellets were injection molded at 315° into test squares having notched impact strength 4.1 ft-lbs/in. and unnotched impact strength 12.4 ft-lb/in.

L132 ANSWER 55 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN
 1980:533317 Document No. 93:133317 Organic materials with m,p-isopropylidenediphenoxy units. Keeley, Donald Edward (General Electric Co., USA). Ger. Offen. DE 2948642 19800619, 23 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1979-2948642 19791204.

GI



AB 4-[2-(3-Hydroxyphenyl)-2-propyl]phenol (I) [46765-25-7] is prepared and used to prepare polycarbonates, polyethers, polyether-polysulfones, polycarbonate-**siloxane** block copolymers, and polyesters with good molding properties. I is also used to prepare compound II [74343-20-7], which is used with m-phenylenediamine and phthalic anhydride to prepare a polyether-polyimide [74747-10-7] with good molding properties. Thus, a mixture of phenol [108-95-2] 5, m-isopropenylphenol [51985-06-9] 1, and toluene 21 parts was treated with aqueous H2SO4 to prepare 81% I. I and **phosgene** were used to prepare a polycarbonate [74747-11-8] with **glass** temperature ≈112° and good molding properties.

L132 ANSWER 56 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN
 1980:148660 Document No. 92:148660 Polycarbonate articles coated with an adherent, durable silica-filled organopolysiloxane coating with process for producing same. Humphrey, James Stevenson (General Electric Co., USA). Brit. UK Pat. Appl. GB 2018622 19791024, 14 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1979-12752 19790411.

AB Scratch-and mar-resistant polycarbonate, useful for windows and windshields, is manufactured by priming a polycarbonate substrate with an UV-curable primer containing a polyfunctional acrylic ester monomer, a polymerizable unsatd. Si compound, an acrylate-modified polymer, and a UV photoinitiator, UV-irradiation curing the primer, and over coating with a layer of SiO2-filled polyorganosiloxane. Thus, 0.125-in.-thick 2,2-bis(4-hydroxyphenyl)propane-**phosgene** polymer [25971-63-5] sheets were primed with a 0.5-mil-thick layer of a composition prepared by blending Uvimer 545 10, diethylene glycol diacrylate 10, 50% aged ethanolic N-[3-(triethoxysilyl)propyl]maleamic acid 10, resorcinol monobenzoate 2, and α,α-diethoxyacetophenone [6175-45-7] 0.5 parts diluted to 2% in iso-BuOH. The composition was cured by UV irradiation under

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25 psi N. Com. colloidal SiO₂ was mixed 4 h with MeSi(OMe)₃ acidified with 2.5% HOAc, adjusted to pH 3.9, diluted to 18% solids by Me₂CHOH, and aged 4 days to form a polysiloxane top coating composition which was applied to the acrylic copolymer [73230-32-7]-primed polycarbonate, air dried 30 min, and cured 1 h at 250°F.

L132 ANSWER 57 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1980:148659 Document No. 92:148659 Polycarbonate article coated with an adherent, durable, silica-filled organopolysiloxane coating and process for producing same. Humphrey, James Stevenson (General Electric Co., USA). Brit. UK Pat. Appl. GB 2018621 19791024, 15 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1979-12751 19790411.

AB Scratch- and mar-resistant polycarbonate, useful for windows and windshields, is manufactured by priming a polycarbonate substrate with an UV-curable primer containing a polyfunctional acrylic ester monomer, a polymerizable unsatd. Si compound, a UV photoinitiator, and resorcinol monobenzoate (I) [136-36-7], UV-irradiation curing the primer, and coating with a layer of colloidal SiO₂-filled polyorganosiloxane. Thus, 0.125-in.-thick 2,2-bis(4-hydroxyphenyl)propane-**phosgene** polymer [25971-63-5] sheets were primed with a thin film of a composition obtained by blending 1,6-hexanediol diacrylate 50, 50% aged ethanolic N-[3-(triethoxysilyl)propyl]maleamic acid 50, α,α -diethoxyacetophenone [6175-45-7] 1.5, I 7.5, and iso-BuOH 750 g and diluting 1:1 with iso-BuOH. The primer was cured by UV irradiation at 25 psi N pressure. The copolymer [73230-37-2]-coated panel was flow-coated with a SiO₂-filled polyorganosiloxane composition prepared by stirring com. colloidal SiO₂ dispersion 4 h with MeSi(OMe)₃ acidified with 2.5% HOAc, adjusting to pH 3.9, diluting to 18% solids with Me₂CHOH, and aging 4 days. The coating was resistant to 700 h exposure in a Weather-O-Meter, >30 cycles of humidity oven testing, and 100-200 h exposure to an RS sunlamp compared with 300 h, 1 humidity cycle, and 36 h, resp., for an unprimed silicone-coated polycarbonate sample.

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1980:148658 Document No. 92:148658 Polycarbonate article coated with an adherent, durable organopolysiloxane coating and process for producing same. Humphrey, James Stevenson (General Electric Co., USA). Brit. UK Pat. Appl. GB 2018620 19791024, 14 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1979-12749 19790411.

AB Scratch- and mar-resistant polycarbonate, useful for windows and windshields, is manufactured by priming a polycarbonate substrate with a UV-curable primer containing a polyfunctional acrylic ester monomer, a polymerizable unsatd. Si compound, and a UV photoinitiator, UV curing of the primer, and over coating with an organopolysiloxane composition. Thus, 0.125-in.-thick sheets of 2,2-bis(4-hydroxyphenyl)propane-**phosgene** polymer [25971-63-5] were primed with a thin film of a composition prepared by blending 1,6-hexanediol acrylate 50, 50% aged ethanolic N-[3-(triethoxysilyl)propyl]maleamic acid 50, α,α -diethoxyacetophenone [6175-45-7] 1.5, resorcinol monobenzoate 7.5, and iso-BuOH 750 g and diluting 1:1 with iso-BuOH. The coating was subjected to UV-irradiation under 25 psi N to give a cured copolymer [73230-37-2] coating. The primed sheet was over coated with an organopolysiloxane coating composition, dried 30 min, and cured 1 h at 250°F.

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1980:148657 Document No. 92:148657 Polycarbonate articles coated with an adherent, durable organopolysiloxane coating and process for producing same. Humphrey, James Stevenson (General Electric Co., USA). Brit. UK Pat. Appl. GB 2018619 19791024, 13 pp. (English). CODEN: BAXXDU. APPLICATION: GB 1979-12750 19790411.

AB Scratch- and mar-resistant polycarbonate, useful for windows and windshields, is manufactured by priming a polycarbonate substrate with a

UV-curable composition containing a polyfunctional acrylic acid ester, an unsatd.

polymerizable Si compound, an acrylate-modified polymer, and an UV photoinitiator, UV curing the primer, and top coating with an organopolysiloxane. Thus, injection-molded 0.125-in.-thick 2,2-bis(4-hydroxyphenyl)propane-**phosgene** polymer [25971-63-5] sheets were coated with a 23-mil-thick wet film of a composition prepared by blending Uvimer 545 10, diethylene glycol diacrylate 10, 50% ethanolic N-[3-(triethoxysilyl)propyl]maleamic acid 10, resorcinol monobenzoate 2, and α,α -diethoxyacetophenone [6175-45-7] 0.5 parts diluted to 2% in iso-BuOH. The dried film was cured by UV-irradiation under 25 psi N pressure. The copolymer [73230-32-7]-coated panels were top coated with an organopolysiloxane, air dried, and baked 1 h at 250°F.

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1979:576165 Document No. 91:176165 Organopolysiloxane-phenolphthalein-polycarbonate copolymers. Factor, Arnold (General Electric Co., USA). U.S. US 4167536 19790911, 6 pp. (English). CODEN: USXXAM. APPLICATION: US 1978-926842 19780721.

AB Polymeric compns. containing **siloxane** units, carbonate units, and a phenolphthalein (I) nucleus were thermally processable and had excellent flame resistance and smoke properties. Thus, a mixture containing 400 mL CH₂Cl₂, 56 mL pyridine, and 90 g I was combined with a solution containing 400 mL

CH₂Cl₂ and 10 g Cl-terminated dimethylsiloxane (d.p. 20) to give a I-terminated **siloxane** which was treated with 110 mol % **phosgene** in 20 min. The mixture was purged with N and treated with MeOH to precipitate the polymer product having, after purification, oxygen index 37,

yield elongation 5%, elongation at break 23%, decomposition temperature in air 418°, decomposition temperature in N 446°, and **glass** transition temperature .apprx.250° when I-**siloxane** ratio was 90:10.

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1978:511286 Document No. 89:111286 Flame-resistant polycarbonate composition. Mark, Victor (General Electric Co., USA). Ger. Offen. DE 2744016 19780420, 28 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1977-2744016 19770930.

AB A polycarbonate was mixed with K 4-(phenylsulfonyl)benzenesulfonate (I) [66671-15-6], 3,3'-disulfodiphenyl sulfone di-K salt [63316-33-6], Na p-toluenesulfonate [657-84-1], Na 4-chlorobenzenesulfonate [5138-90-9], or a similar compound and with KBr, decabromodiphenyl ether [1163-19-5], a tetrahalobisphenol A polycarbonate, pentabromotoluene [87-83-2], or a similar compound to prepare fire-resistant polycarbonates. A fluoropolymer, a **siloxane**, or **glass** fibers were also added to reduce dripping during exposure of the polycarbonate to a flame. Thus, bisphenol A-**phosgene** copolymer [25971-63-5] containing I 0.1, PTFE [9002-84-0] 0.05, and KBr 0.1% was fire resistant (V-O in UL 94 test) and did not drip during exposure to flame.

L132 ANSWER 62 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1977:585014 Document No. 87:185014 Preparation of silicon-containing polycarbonates by low-temperature polycondensation in an organic medium. Sheludyakov, V. D.; Gorlov, E. G.; Mkhitarian, S. S.; Zhinkin, D. Ya. (USSR). Vysokomolekulyarnye Soedineniya, Seriya B: Kratkie Soobshcheniya, 19(9), 659-63 (Russian) 1977. CODEN: VYSBAI. ISSN: 0507-5483.

AB The title polycarbonates were obtained by polycondensation of diols (HOCH₂SiMe₂)₂O (I), [HO(CH₂)₃SiMe₂]₂O (II), and [o-HOC₆H₄(CH₂)₃SiMe₂]₂O (III) with **phosgene**, and by polycondensation of bis-chloroformates of I-III with bisphenol A, as well as by

copolycondensation of I or III with bisphenol A and **phosgene**. The reactions were conducted in organic solvents (PhMe, CH₂Cl₂, CCl₄, etc.) in the presence of Et₃N or pyridine. Optimum conditions of the reactions with resp. to reduced viscosity and yield of the polymers were established, and physicomech. properties (solubility, **glass** transition temperature, etc.) and thermal stabilities of the latter were determined

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1977:122076 Document No. 86:122076 Effect of modifying additives on the properties of polycarbonate. Smirnova, O. V.; Korovina, E. V.; Serebrennikova, A. I.; Sheludyakov, V. D.; Mkhitaryan, S. S. (USSR). Plasticheskie Massy (1), 49-51 (Russian) 1977. CODEN: PLMSAI. ISSN: 0554-2901.

AB In preparing polycarbonates from 1,1-bis(4-hydroxyphenyl)cyclohexane (I) and **phosgene** (II), partial substitution of II by (ClCOCH₂SiMe₂)₂O (III) or (ClCOCH₂CH₂OCH₂SiMe₂)₂O led to copolymers having improved H₂O- and alkali-resistance and good adhesion to **glass**. A I-II-III polycarbonate [33827-76-8] film having 70:30 II-III ratio had separation resistance 6.5 kg/cm² on adhesion to **glass**. The modified polycarbonates are proposed as protective coatings for **glass**.

L132 ANSWER 64 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1977:107296 Document No. 86:107296 Tough, transparent heat- and flame-resistant thermoplastics via silicone block-modified bisphenol fluorenone polycarbonate. Kambour, R. P.; Corn, J. E.; Miller, S.; Niznik, G. E. (Chem. Lab., Gen. Electr. Co., Schenectady, NY, USA). Journal of Applied Polymer Science, 20(12), 3275-93 (English) 1976. CODEN: JAPNAB. ISSN: 0021-8995.

AB The block copolymers were synthesized by interfacial condensation of **phosgene** [75-44-5] with various mixts. of silicone oligomers capped with bisphenol fluorenone (I) [3236-71-3], and free I or its monosodium salt, and contained 7-27% silicone blocks of number-average d.p. 10-40 which were cast as clear, colorless films. Each resin had 2 **glass** temps., one at .apprx.-100° for the silicone microdomains, and the other at ≤275° for the polycarbonate matrix. Although the I polycarbonate is brittle, block polymers with ≥10% silicone yield by shear deformation before breaking and the ultimate elongations are increased by preorientation at silicone contents >15%. The ultimate tensile elongation, impact toughness, and plane strain-stress intensity factors increased with increasing silicone content, through a stress whitening mechanism, and at higher silicone contents, shear deformation increased the tensile elongation and impact toughness. The flame resistance of the resins exceeded that of any known nonhalogenated resins, and heat distortion temps. ≥200° were observed. Resins containing 15-20% silicone were tough, transparent, heat- and flame-resistant engineering plastics, extrudable and injection-moldable with only minor changes in color, transparency, and strength properties.

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1977:6159 Document No. 86:6159 Inorganic-organic plastics. Markusch, Peter; Dieterich, Dieter; Dietrich, Manfred (Bayer A.-G., Fed. Rep. Ger.). Ger. Offen. DE 2512170 19760923, 59 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1975-2512170 19750320.

AB Polyisocyanates with viscosity ≥400 cP and average functionality >2 were used with aqueous silicate solns. to prepare cellular materials, useful as building materials, etc., with high strength, elasticity, heat deformation resistance, and fire resistance. Thus, 100 parts polyisocyanate (dist. of the phosgenation product of aniline-HCHO condensate), with viscosity 1700 cP and NCO content 30.4%, containing 25 parts Cl₃CF was mixed with 250 parts Na water **glass** (48% solids), Na₂Si₂O₅ containing 1.5 part stabilizer (**siloxane**) and 4 parts amine catalysts (75%

Me₂NCH₂CH₂OH and 25% diazabicyclooctane) to prepare a tough foam with fine, uniform cells, d. 69 kg/m³, and compressive strength 1 kg/cm².

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1975:73515 Document No. 82:73515 Synthesis and study of organosilicon polycarbonates. Smirnova, O. V.; Klenova, T. S.; Khatuntsev, G. D.; Sheludyakov, V. D.; Mironova, N. V.; Serebrennikova, A. I. (Mosk. Khim.-Tekhnol. Inst. im. Mendeleeva, Moscow, USSR). Vysokomolekulyarnye Soedineniya, Seriya A, 16(9), 1940-4 (Russian) 1974. CODEN: VYSAAF. ISSN: 0507-5475.

AB The optimum conditions for preparation of Si-containing polycarbonates, prepared from

1,1-bis(4-hydroxyphenyl)cyclohexane, **phosgene** and organosilicon bischloroformates (I), was determined and copolymer films showed a resistance to 40% aqueous NaOH and good adhesion to mineral **glass**.

1,3-Bis[o-chloroformato]phenoxyethyl-1,1,3,3-tetramethyldisiloxane-1,1-bis(4-hydroxyphenyl)cyclohexane-**phosgene** polymer (II) [53640-25-8] and 1,3-bis[γ-(o-chloroformatophenyl)propyl]1,1,3,3-tetramethyldisiloxane-1,1-bis(4-hydroxyphenyl)cyclohexane-**phosgene** polymer (III) [53640-26-9] were examined and the highest viscosity and yield were obtained for II and III containing 15 and 10% I, resp., and the films prepared from these copolymers had the maximum mech. properties. The mol.

weight

distribution curves, obtained from turbidimetric titrations, indicated that II and III were copolymers and not a mixture of homopolymers, which was confirmed by ir spectroscopy. The introduction of I into the polycarbonate molecules decreased their mol. weight loss. The highest stability to 40% NaOH and the best adhesion to **glass** had I and II containing 30% acyl chloride.

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1974:134464 Document No. 80:134464 Substances consisting of **glass** and polyamide. Sakata, Hiroshi; Mizuno, Kozo; Isozaki, Fumihiko (Unitika Ltd.). Jpn. Tokkyo Koho JP 48029632 B4 19730912 Showa, 3 pp. (Japanese). CODEN: JAXXAD. APPLICATION: JP 1969-97490 19691204.

AB Good chemical bonding of polyamide to **glass** fiber was obtained by treating the fiber with an **aminosilane** of the formula RHNZSiR₁R₂R₃ (R = H, lower alkyl; R₁, R₂, R₃ = alkyl, alkoxy, halogen; Z = alkalene) and treating the resulting fiber with COCl₂ or acid chloride prior to forming a laminate with polyamide.

L132 ANSWER 68 OF 70 HCAPLUS COPYRIGHT 2004 ACS on STN

1964:49111 Document No. 60:49111 Original Reference No. 60:8647e-f Purity examination of silicon and germanium halides by longpath infrared spectrophotometry. Rand, Myron J. (Bell Telephone Labs., Inc., Allentown, PA). Anal. Chem., 35(13), 2126-31 (Unavailable) 1963. CODEN: ANCHAM. ISSN: 0003-2700.

AB A method was developed for detection of impurities present in low concns. in SiCl₄ (I), SiBr₄ (II), GeCl₄ (III), and GeBr₄ (IV). The useful range for detection of impurities was limited by the 2ν₃ absorption lines at: I 8.2, II 10.3, III 11.0, and IV 15.2 μ; concns. as low as 0.05 p.p.m. can be detected. Impurities found in samples of "pure" liquids and their concns. in p.p.m. were: I HCl 50-250, CO₂ 5-50, SiHCl₃ 1000, CCl₄ 100, Si₂OCl₆ 100-500, suspected Si(OH)Cl₃, COCl₂, and a gas; II OH, HBr, and, possibly, CHBr₃ and COBr₂; III OH, HCl, CO₂, COCl₂, and, possibly, SiCl₄ or CHCl₃ and Ge₂OCl₆; IV H₂O, CBr₄, and HBr. One sample of IV was hopelessly contaminated. When I was stored unsealed in a borosilicate **glass** container, OH, HCl, and CO₂ increased. Absorption bands of 25 possible impurities found in Group IV halides, their approx. absorptivities, and their detection limits are tabulated. 35 references.

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Searched by: Mary Hale 571-272-2507 REM 1D86

1963:482784 Document No. 59:82784 Original Reference No. 59:15442h,15443a-c
Unsaturated organosiloxane size for **glass** fibers. Dennis,
William J. (Fiberglas Canada Ltd.). CA 668475 19630813, 15 pp.
(Unavailable). APPLICATION: CA 19581121.

AB Sizes were made from hydrolysis products of unsatd. organosilanes (I),
i.e. vinyl or alkyl **silanes** containing hydrolyzable groups attached
to the Si. To assure controlled polymerization, I was first hydrolyzed at
pH 7-8 with NH₄OH, then acidified to pH 3-6 with ACOH. Poly(vinyl
acetate), included as a film-forming agent, contained 0.075% by weight
poly(vinylpyrrolidinone) and was pretreated with 0.75% by weight HCl
(20° Be.) to improve the dissipation of static electricity. Thus,
0.66% by weight vinyl tris(β-methoxyethoxy) **silane** was added
to cold water adjusted to pH 5.0-5.5 with AcOH, and the mixture stirred for
25 min. to form a clear solution. The pH was adjusted to 7.2 with diluted
NH₄OH, and the solution stirred for 60 min. to give a partially polymerized
vinyl silanol solution. Then, 0.75% by weight aqueous HCl (1:1) is stirred into
4.17% by weight poly(vinyl acetate) emulsion for 30 min., and this emulsion
is added to the silanol solution to give a mixture with pH 3.5. A fatty acid
amide lubricant (A.H.C.O. 185 A) (0.10% by weight) is then dissolved in water
at 160°F., adjusted to pH 6.5, cooled to 70°F., and the
solution added to the above mixture. An aqueous poly(vinylpyrrolidinone)
(0.075% by
weight) solution is then added, together with water, to bring the mixture to
95%
of the required final volume, and the pH adjusted to 4.0-4.5 with dilute
NH₄OH.

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1962:71460 Document No. 56:71460 Original Reference No. 56:13756f-i,13757a
Halogen exchange reaction in fused fluorides. Sundermeyer, W. (Univ.
Goettingen, Germany). Zeitschrift fuer Anorganische und Allgemeine
Chemie, 314, 100-3 (Unavailable) 1962. CODEN: ZAACAB. ISSN: 0044-2313.

AB Fluorides and oxyfluorides of groups IV-VI in the periodic system can be
obtained easily in good yields by passing the corresponding Cl (Br, I)
compds. as vapors through fused alkali and (or) alkaline earth fluorides.
Addition of ZnF₂, AgF₂, etc., as catalysts is advisable if the reaction
temperature

must be kept low. Me₃SiF (115 g.), b. 16° was prepared in 84% yield
by passing 260 ml. of vaporized Me₃SiCl over a period of 5 hrs. through
2.5 kg. of KF-LiF-NaF (45, 45, and 10 mole %; m. 454°) at
500°. Besides unreacted Me₃SiCl, traces of Me₂SiF₂ were
identified. By using the same salt mixture, the following compds. were
synthesized (yield given): 235 g. SOF₂ (80%), b. -43 to -40°, from
400 g. SOCl₂ at 600° (by-products: SO₂, SiF₄, traces of SO₂F₂, COS,
and CF₃Cl); 206 g. SO₂F₂ (70%), b. -52 to -50° (free of other S
fluorides), from 416 g. SO₂-Cl₂ (by-products: SO₂, Cl, and traces of
SiF₄); COF₂, b. -83 to -80°, from Cl₂CO (3 bubbles/sec. in wash
bottle) at 550° for 20 hrs. (gas analysis after reaction had become
constant: 70% COF₂, 25% CO₂, which probably came from reaction of COF₂ with
the **glass** at high temps., 4-5% SiF₄, traces of COFCl, and
COCl₂); PF₃, b. -101°, in 20 % yield, from vaporized PCl₃ at
500°, with formation of alkali fluorophosphates. Although
repeatedly contacted, only 12% of the 216 g. of CCl₄ vapor reacted with
the fused NaF-LiF-KF mixture at 550° to give 40% CO₂, 25% CFC₃, 25%
CF₂Cl₂, and small amts. of CF₃Cl and SiF₄. Passing 384 g. of gaseous
SOCl₂ through 61 g. of LiF and 99 g. of KF dissolved in 1.5 kg. of
dehydrated LiCl-KCl (58.3-41.7 mole %; p. 354°) at 420°
yielded 81 g. SOF₂ (43%), free of SO₂F₂, and large amts. of SO₂ and SiF₄.
SO₂F₃ (208 g., 69%) was obtained by contacting 400 g. of gaseous SO₂Cl₂ at
300° with 400 g. of CaF₂ suspended in 2.9 kg. of KCl-ZnCl₂ (46-54
mole %; m. 228°) (by-products: SO₂, Cl₂, SiF₄, and SO₂Cl₂). Less
SiF₄ is produced if graphite equipment is used instead of **glass**.

=> log y

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	275.10	295.13
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-60.98	-60.98

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